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A study was undertaken to provide planners, educators, administrators, and citizen leaders with basic information on neighborhood environmental characteristics related to extending educational opportunities--with emphasis on teacher education--in New York City. Correlation and factor analyses of data from 1960 census tabulations and from various city agencies were used to develop socioeconomic and family status indexes. The 338 health areas (statistical areas used by city agencies) were classified into 15 types according to the indexes. A profile was produced for each of the areas, each of the types, and each of the five buroughs, plus one for the city total. Profiles provide data concerning 50 variables which include ethnicity and geographic mobility indicators, juvenile delinquency rates, and City University of New York (CUNY) teacher education census data, in addition to the socioeconomic and family status indicators. Pairs of maps were also prepared to show the geographic patterning for each of the variables on the profiles. Profiles and maps may be procured from CUNY at the cost of reproduction. (Included are five chapters discussing the rationale for the study and potential uses of the data, materials, and methods developed. Appended are additional statistical data and tabulations including tables of 1960, 1965, and 1966 data on percent of population nonwhite or Puerto Rican in each area.) (JS)

THE RELATIONSHIP OF NEIGHBORHOOD CHARACTERISTICS TO THE PARTICIPATION OF YOUNG PEOPLE IN TEACHER EDUCATION AT CUNY COLLEGES

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THE RELATIONSHIP OF NEIGHBORHOOD CHARACTERISTICS TO THE PARTICIPATION OF YOUNG PEOPLE IN TEACHER EDUCATION AT CUNY COLLEGES

Chapter 1 Introduction

New York City is well known for its time honored support of free Teacher Education for those young people able to meet minimum standards. The education facilities at the free city colleges have aided in the assimilation of immigrants from the Old World and to an even greater extent the advancement of their children and grandchildren. More recently the bulk of the immigrants have come from the rural South or Puerto Rico where educational programs have been minimal. Because of discrimination and language difficulties as well as deficiencies in pre-college education, the youth among these people are seldom able to make use of existing facilities in higher education.

To provide planners, educators, administrators, and citizen leaders with basic information related to extending educational opportunities for all citizens, the study outlined in this report was undertaken. Use was made of computers and tabulating machines in the processing of the source data obtained largely from 1960 Census tabulations through the New York City Department of City Planning. Supplementary data were obtained from the New York City Health Department, Youth Board, and from within the Division of Teacher Education, City University.

In the absence of systematic knowledge concerning data items likely to be predictive of participation in Teacher Education, intuition, judgment and experience in other metropolitan areas were drawn upon to assemble a comprehensive set of variables. Altogether 62 variables were used in the initial correlation and factor analysis runs. For each of these 62 variables a ratio, median, or per cent was computed for each of 338 Health Areas in New York City resulting in nearly 21,000 numbers. The Health Areas are community statistical areas used by New York City agencies. Each Health Area includes a number of census tracts for which data were tabulated and published from the 1960 Census by the United States Census Bureau. About eight Health Areas made up largely of institutional populations were excluded from the analysis.

One of the first problems was the identification of the specific variables which represent major "dimensions" or "factors". A study of relevant articles in social science journals indicated that it was possible to identify variables highly correlated with each other, through the use of a factor analysis program on a large computer. Accordingly, runs were made from which two sets of variables were identified. Ten variables which were highly correlated with each other were called socio-economic variables. Five variables not correlated with the first set but highly correlated with each other were called "family" variables. Before accepting these variables, tests were conducted using factor analysis runs for each of the five boroughs separately. Any variables which failed to pass the inter-correlation test in two or more boroughs, were excluded. It was felt that limiting the variables to those which were highly inter-correlated in nearly all the boroughs would result in the most clear cut indices for New York City as a whole.

The ten socio-economic variables are listed in Table 1 along with the correlation coefficients between each pair.

Table 1

Inter-correlations Between 10 Variables Included in the Socio-Economic Index

	12 years or more of school 2	8 years or more of school 3	% enrolled in college 4	Elementary & secondary tchrs. 5	Prof. & white collar workers 6	1959 median family income 7	Over $10,000 income 8	Over $3,000 income 9	H.U. not deter. or dilapidated 10
1. Median years of school completed by population 25 or over	.970	.890	.737	.691	.881	.703	.866	.633	.573
2. % of pop. 25 or over with 12 yrs. or more of schooling	X	.864	.754	.666	.888	.739	.882	.607	.550
3. % of pop. 25 or over with 8 yrs. or more of schooling		X	.633	.648	.867	.724	.822	.819	.732
4. Enrollees in college as % of population 15 to 24			X	.686	.800	.496	.632	.479	.483
5. Elementary & secondary school tchrs. per 1,000 wkrs. in L.F.*				X	.773	.448	.606	.559	.553
6. Professional, managerial, clerical & sales wkrs. as % employed wkrs.					X	.718	.860	.743	.696
7. Median family income in 1959						X	.901	.689	.554
8. % of families with 1959 incomes over $10,000							X	.688	.574
9. % of families with 1959 incomes over $3,000								X	.785
10. % of housing units not in a deteriorating or dilapided condition									X

For persons not familiar with correlation coefficients it should be indicated that perfect correlation is represented by a coefficient of 1.0 while complete absence of correlation is represented by zero. Values between these two extremes are indicative of the degree of correlation.

The 45 pairs of correlations shown in Table 1 averaged .708. The lowest correlation coefficient was .448 and the highest .970. Thirteen of the 45 correlations were greater than .800.

It should be quite evident from a glance at the variables in Table 1, that they were closely related to socio-economic conditions. The three variables representing different "views" of the school achievement of the adult population had correlation coefficients of .820 or better in relation to the "per cent of families with incomes over $10,000."

The five family status variables are listed in Table 2 along with the correlation coefficients between each pair.

Table 2

Inter-correlations Between 5 Variables Included in the Family Status Index

	Related Individ. 2	Hshlds. with male Head 3	Fem. not in the L. F. 4	Aver. rms. per hshld. 5
1. % of hshlds. with 2 or more persons per household	.951	.789	.765	.792
2. Related individuals as a % of the population	X	.776	.814	.707
3. Households with a male head as a % of households		X	.768	.695
4. Females-not in the labor force as % of females 14 or over			X	.582
5. Average number of rooms per occupied housing unit				X

The 5 pairs of correlations coefficients shown in Table 2 averaged .764 as contrasted with an average of .708 for those shown in Table 1. These correlations ranged from .582 to .951. All but one had correlations of .695 or better.

The dimension or factor represented by the five variables in Table 2 is not quite as clear cut as in the case of the socio-economic dimension data shown in Table 1. On the average, families or households of 2 or more persons are stronger social units than households made up of one person living alone. Areas with a high proportion of related persons living in the household (as contrasted with unrelated persons) are likely to be stronger social units than households made up of unrelated persons. Similarly, households (or families) with a male head are more likely to have stability and capacity to withstand serious crises than families with only a female head. Female headed families usually have only one parent in the home while male headed families almost always have two parents in the home. Similarly, areas which have a high percentage of female employment outside the home are likely to have families which are less effective social units than areas with women devoting their full attention to home care and child rearing. Although this is a rather broad value judgment, it probably would be accepted by most people. Data were not available from the Census in sufficient detail to evaluate this variable more precisely. The fifth variable (rooms per occupied housing unit) is very obviously related to family status.

Having established a high intercorrelation between the ten socio-economic variables and between the five family status variables, there remains the question of correlation between the ten socio-economic variables and the five family status variables.

Table 3 shows the correlation coefficients between the 50 sets of variables. It is evident that their average correlation was low (.007). It will be noted that unlike the correlations shown in Tables 1 and 2, those in Table 3 included some coefficients with negative values. A correlation of - .350 is shown between "% of population 25 or over with 12 years or more of schooling" and "related individuals as a per cent of the population". This means that high educational status tends to be associated with a low percentage of related individuals in the population. Table 3 documents the statement that there was comparatively little correlation between socio-economic and family status variables.

The next important problem to be solved was the development of a procedure for combining the variables in a particular factor or dimension so as to produce an index. The customary procedure used in factor analysis is to compute "factor scores" for each variable. This is accomplished by the use of "standard deviations units". However, this procedure can only be used when the data are normally distributed. More than half of the variables in each of the two groups were very highly skewed (coefficient of skewness over .500) and accordingly some other method than one based on standard scores was needed. The simplest and clearest solution was to rank the 338 observations within each variable so as to produce 15 arrays. A most efficient method utilizing a percentile deck and a reproducing machine worked quite

Table 3

Inter-correlations Between 5 Variables in the Family Status Index and 10 Variables in the Socio-Economic Index

	% of hshlds. with 2 or more persons per household 11	Related indiv. as % of the pop. 12	Households with male head as % of the hshlds. 13	Females not in the labor force as % of females 14 or over 14	Aver. no. of rooms per occupied housing unit 15
1. Median yrs. of school completed by pop. 25 or over	-.191	-.292	+.026	-.223	.032
2. % of pop. 25 or over with 12 yrs. or more of schooling	-.247	-.350	-.020	-.273	-.038
3. % of pop. 25 or over with 8 yrs. or more of schooling	-.014	-.089	+.200	-.122	-.236
4. Enrollees in college as % of pop. 15 to 24	-.200	-.292	-.003	-.179	+.143
5. Elementary & secondary school teachers per 1,000 workers in the labor force	+.164	+.126	+.312	+.178	.214
6. Professional, managerial, clerical & sales workers as % employed workers	-.089	-.132	+.200	-.034	.039
7. Median family income in 1969	-.044	-.150	+.162	-.051	.234
8. % of families with 1969 incomes over $10,000	-.155	-.243	+.115	-.128	.131
9. % of families with 1959 incomes over $3,000	-.329	-.261	.579	.181	.485
10. % of housing units not in a deteriorating or dilapidated condition.	-.338	-.279	.477	.262	.372

well so that each of the 338 observations in each of the 15 variables was assigned a code between "00" and "99" in accordance with their rank order positions in the array. The three highest areas in a particular variable were coded "99" and the three lowest areas were coded "00". All of the intervening areas were similarly coded to indicate the percentage of areas with lower ratios. Punch card machines were then used to sort the ten sets of cards representing the ten variables for the socio-economic index after which totals of the ten percentiles for each area were obtained and punched into a new deck of cards along with the code for the area. As will be explained later these percentiles were also used in producing the Area Profiles. An exactly similar procedure was used for producing the Family Status Index.

The two indexes were used to group the 338 Health Areas into four equal categories according to the Socio-Economic Index as well as into four equal categories according to the Family Status Index. This resulted in a framework of 16 cells or "types" (4 times 4). Interestingly enough, when the 338 Health Areas were assigned to their proper cubby holes according to the two indexes, one of the cubby holes did not contain a single Health Area while each of the other 15 contained from 14 to 35 areas. Table 4 below shows the framework along with the number of areas and their 1960 population in each type of area.

Table 4

Classification of 338 Health Areas Into 15 Types of Areas
According to the Socio-Economic and Family Status Indexes

	Family Status Index			
Socio-Econ. Index	High A	B	C	D Low
High 1	Type 1A 30 areas 774,000 pop.	Type 1B 14 areas 341,000 pop.	Type 1C 16 areas 449,000,pop.	Type 1D 25 areas 593,000 pop.
2	Type 2A 35 areas 847,000 pop.	Type 2B 18 areas 444,000 pop.	Type 2C 16 areas 411,000 pop.	Type 2D 16 areas 356,000 pop.
3	Type 3A 20 areas 393,000 pop.	Type 3B 27 areas 576,000 pop.	Type 3C 19 areas 448,000 pop.	Type 3D 18 areas 399,000 pop.
4 Low	Type 4A (no areas)	Type 4B 26 areas 538,000 pop.	Type 4C 33 areas 678,000 pop.	Type 4D 25 areas 517,000 pop.

The areas are labelled systematically by type using a number from 1 to 4 in the first digit to indicate the four socio-economic levels. Similarly, a letter from A to D in the second digit is used to identify the four classifications based on the Family Status Index. An area in the highest socio-economic classification and also in the highest family status group is labelled "1A". Similarly, an area in the lowest socio-economic level as well as in the lowest family status grouping is labelled 4D. The other 13 types are similarly designated as shown in Table 4.

It should be kept in mind that the 338 Health Areas vary in size from 5,640 to 45,729 persons according to the 1960 U. S. Census. They average 23,000 persons. The 15 types with 14 to 35 Health Areas each varied in population from 341,000 to 847,000 persons (as shown in Table 4).

Although type of area groupings were not established on the basis of geographic proximity, Maps 1A and 1B show that there are large groupings of contiguous areas of the same type. For example, in the northwestern part of Queens Borough there are 18 contiguous Health Areas classified in type 1A. On the east side of Manhattan Borough there is a strip of 10 contiguous Health Areas in type 1D. In the Harlem section of Manhattan there are 12 contiguous areas in type 4D.

It should be recognized that there are highly significant differences between boroughs in the distribution of Health Areas among the types. Table 5 shows that Bronx and Brooklyn have relatively few areas in the highest socio-economic stratum while Queens is heavily loaded with areas in this stratum but is almost devoid of areas in the lowest economic level. Brooklyn and Manhattan are well supplied with Health Areas in the lowest socio-economic classification. Manhattan has almost three-fourths of all the areas in the City classified as low in Family Status.

To provide potential users of the information with accessible, relevant, and understandable data, a one-page profile (Chart 1) has been produced by a special type of computer, for each of the 338 Health Areas, each of the 15 types of areas, and each of the five boroughs along with one for the New York City total.* An "Explanatory Sheet on Area Profiles" will be found on pages 12 and 13. ✓

About 60 pairs of maps have been prepared to show the geographic patterning of each of the variables displayed in Chart 1.* Two illustrative maps are presented. Map 2 displays the outlines of the Health Areas in Manhattan, Bronx and Richmond Boroughs with one-digit codes (0, 1, 2, ... 9) showing the standing of each area on an illustrative variable. Map 3 shows the outlines of the Health Areas in the Brooklyn and Queens Boroughs. The map labels indicate not only the name of the particular variable determining the patterns on the map but also the exact class interval represented by each code. Furthermore, the map labels show numerically and graphically the distribution of the 338 Health Areas according to the map codes.

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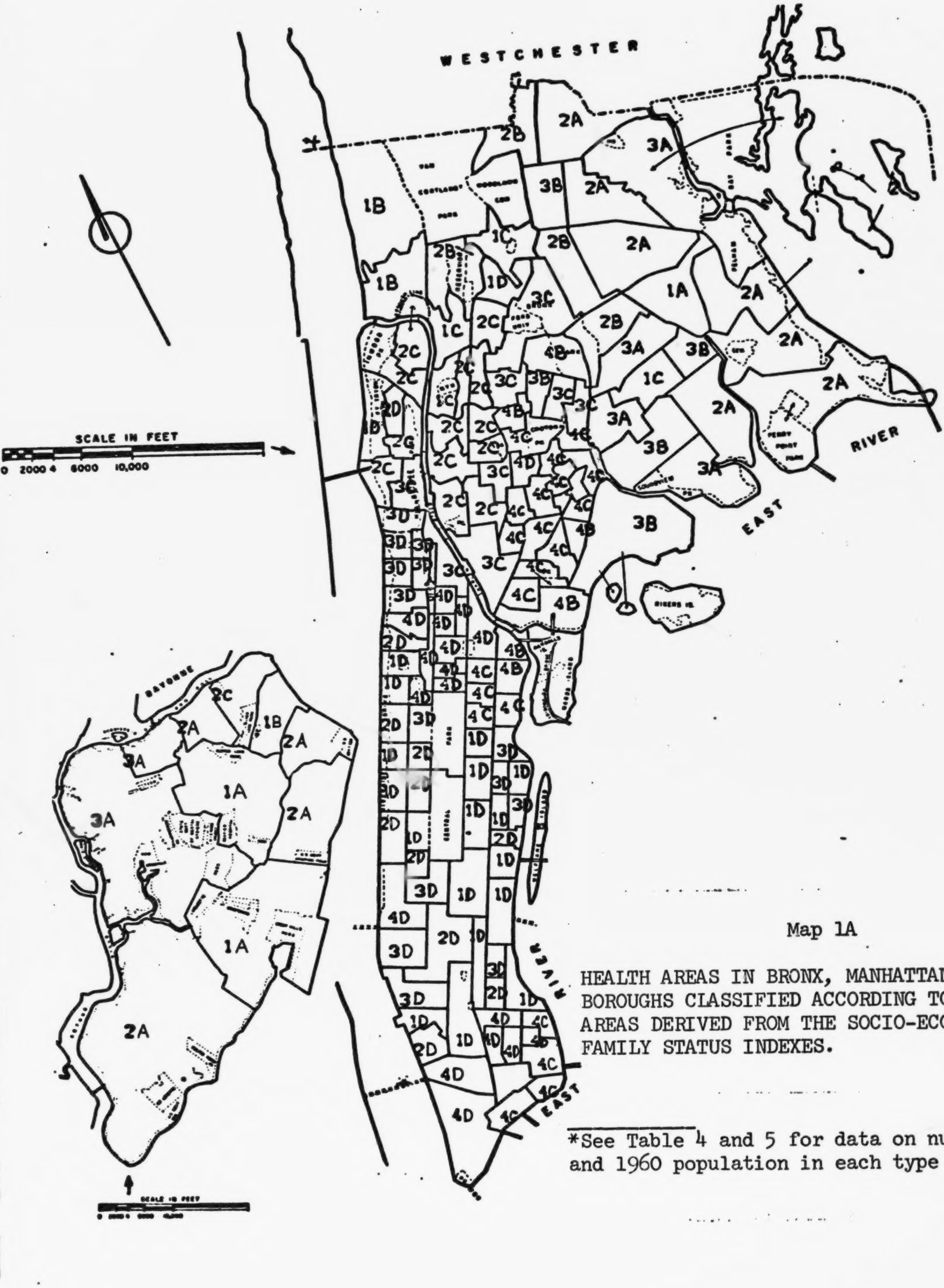
*The profiles and maps may be procured at the cost of reproduction.


WESTCHESTER
SCALE IN FEET
0 2000 4 6000 10,000
EAST RIVER
RIVER
EAST
RIKERS IS.
BAYONNE
SCALE IN FEET
VAN CORTLANDT PARK
WOODLAWN CEM.
PELHAM BAY PARK
FERRY POINT PARK
CENTRAL PARK
1A
1B
1C
1D
2A
2B
2C
2D
3A
3B
3C
3D
4B
4C
4D

Map 1A

HEALTH AREAS IN BRONX, MANHATTAN AND RICHMOND BOROUGHS CLASSIFIED ACCORDING TO 15 TYPES OF AREAS DERIVED FROM THE SOCIO-ECONOMIC AND FAMILY STATUS INDEXES.

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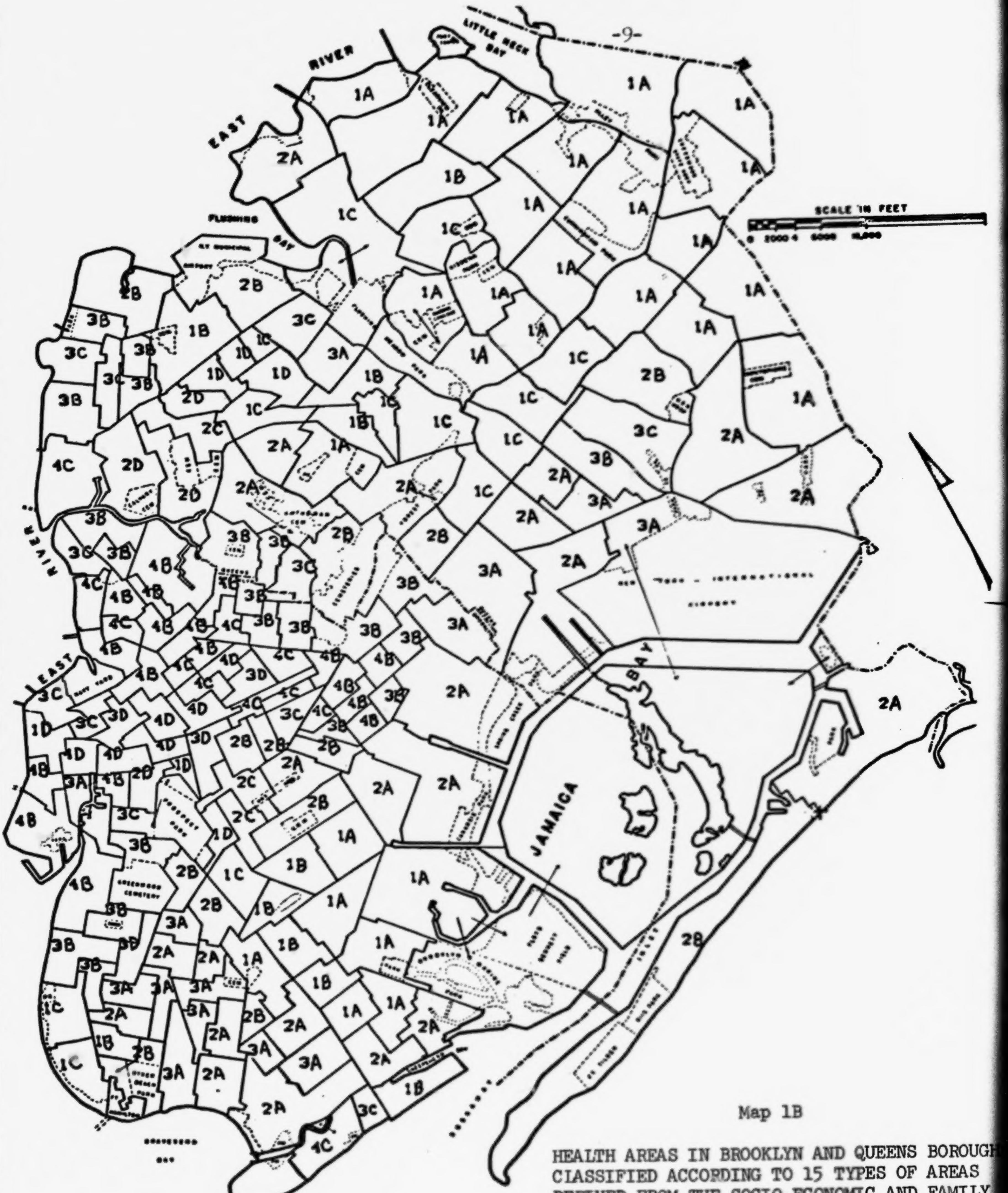
*See Table 4 and 5 for data on number of areas and 1960 population in each type of area.


EAST RIVER
LITTLE NECK BAY
FLUSHING BAY
JAMAICA BAY
GRAVESEND BAY
EAST RIVER
SCALE IN FEET
0 2000 4000 6000 10,000

Map 1B

HEALTH AREAS IN BROOKLYN AND QUEENS BOROUG
CLASSIFIED ACCORDING TO 15 TYPES OF AREAS
DERIVED FROM THE SOCIO-ECONOMIC AND FAMILY
STATUS INDEXES.*

---

*See Table 4 and 5 for data on number of area
and 1960 population in each type of area.

Table 5 Distribution of 338 Health Areas Among 15 Types of Areas Within the Five Boroughs of New York City Together With 1960 Population of These Groupings

Borough and Socio-Econ. Status	Family Status								Totals	
	High A		B		C		D Low			
	No. of Areas	1960 Pop.	No. of Areas	1960 Pop.	No. of Areas	1960 Pop.	No. of Areas	1960 Pop.	No. of Areas	1960 Pop.
Bronx										
Hi 1	1	7,000	2	44,000	4	123,000	1	29,000	8	203,000
2	8	173,000	4	104,000	9	237,000	0		21	514,000
3	4	73,000	5	100,000	6	138,000	0		15	311,000
Lo 4	0		4	78,000	14	297,000	1	19,000	19	394,000
Total	13	253,000	15	326,000	33	795,000	2	48,000	63	1,422,000
Brooklyn										
Hi 1	7	203,000	6	140,000	3	98,000	3	74,000	19	515,000
2	13	345,000	8	188,000	2	59,000	1	29,000	24	621,000
3	10	199,000	15	334,000	7	144,000	3	91,000	35	768,000
Lo 4	0		19	377,000	10	196,000	6	144,000	35	717,000
Total	30	747,000	48	1,039,000	22	497,000	13	338,000	113	2,621,000
Manhattan										
Hi 1	0		0		0		18	417,000	18	417,000
2	0		0		3	70,000	12	265,000	15	335,000
3	0		0		1	26,000	15	308,000	16	334,000
Lo 4	0	———	3	83,000	8	167,000	18	354,000	29	604,000
Total	0		3	83,000	12	263,000	63	1,344,000	78	1,690,000
Queens										
Hi 1	20	506,000	5	140,000	9	228,000	3	73,000	37	947,000
2	10	248,000	6	152,000	1	18,000	3	62,000	20	480,000
3	4	82,000	7	142,000	5	140,000	0		16	364,000
Lo 4	0		0		1	18,000	0		1	18,000
Total	34	836,000	18	434,000	16	384,000	6	135,000	74	1,809,000
Richmond										
Hi 1	2	58,000	1	17,000	0		0		3	75,000
2	4	81,000	0		1	27,000	0		5	108,000
3	2	39,000	0		0		0		2	39,000
Lo 4	0		0		0		0	———	0	
Total	8	178,000	1	17,000	1	27,000	0		10	222,000
New York City										
Hi 1	30	774,000	14	341,000	16	449,000	25	593,000	85	2,157,000
2	35	847,000	18	444,000	16	411,000	16	356,000	85	2,058,000
3	20	393,000	27	576,000	19	448,000	18	399,000	84	1,816,000
4	0		26	538,000	33	678,000	25	517,000	84	1,733,000
Total	85	2,014,000	85	1,899,000	84	1,986,000	84	1,865,000	338	7,764,000

Chart 1 Illustrative Profile for a Health Area

H. A. 24 IN BRONX 1960 POP. = 15.460. TYPE 4C 1960 POP. = 678.000

Var No.	Description of Variables	Ratio, %, or Aver.	Percentile	Bars based on percentiles show the per cent of areas with lower percentages, ratios or averages.	Map code
	SOCIO-ECONOMIC INDEX (based on 10 variables below)	03.4	00		0
03	Median yrs. of school completed by pop.25 or over	07.8	00		0
01	% of pop.25 or over with 12 yrs.or more of school	14.6	02		0
02	% of pop.25 or over with 8 yrs. or more of school	48.7	00		0
04	Enrollees in college as % of pop. 15 to 24	01.5	00		0
06	Elem. & sec. schl. tchrs. per 1000 workers in L.F.		00		0
51	Professional, managerial, clerical and sales workers as per cent of employed workers	20.8	06		0
58	Median family income for the year 1959	3980	05		0
57	% of families with 1959 incomes over $10,000	04.1	05		0
56	% of families with 1959 incomes over $3,000	66.3	03		0
44	% of H.U. not in a deter. or dilapidated condition	63.2	13		3
	FAMILY STATUS INDEX (based on variables below)	47.0	45		4
40	% of hshlds. with 2 or more persons per household	86.2	59		7
39	Related individuals as a % of the population	93.1	56		8
52	Hshlds. with a male head as a % of households	73.2	26		4
53	Females not in L.F. as % of females 14 or over	61.6	49		6
48	Average no. of rooms per occupied housing unit	4.01	45		4
	ETHNICITY INDICATORS				
	Nonwhites (except Puerto Rican nonwhites)				
26	Nonwhite persons as % of 1960 population	22.4	80		7
28	Nonwhite births as % of 1960 resid. live births	25.3	76		7
29	Nonwhite births as % of 1966 resid. live births	39.0	77		8
	Puerto Rican's (both white and nonwhite)				
27	P.R. persons as % of 1960 population	52.0	98		8
30	P.R. births as % of 1960 resident live births	63.9	93		8
31	P.R. births as % of 1966 resident live births	54.3	94		8
25	Foreign Stock (foreign born,or native with for. or mixed parentage) as % of total population	20.1	10		1
21	Northwest Eur.& Canada (Norway,Sweden,UK,Ireland)	01.1	11		1
22	Central Eur.(Austria,Czecho.,Germany & Hungary)	02.7	18		1
23	Eastern Eur.(Poland & USSR) as % of total pop.	08.0	49		2
24	Southern Eur. (Italy) as % of total pop.	01.4	11		1
	CUNY TEACHER EDUCATION CENSUS DATA - SPRING 1968				
07	T.E. students per 1000 est. pop. 18 to 27	1	00		0
08	Non-T.E. students per 1000 est. pop. 18 to 27	5	05		0
09	T.E. stud. as % of all stud. in Senior Colleges	18.8	01		0
15	Full-time T.E. stud. as % of T.E. students	66.7	93		9
19	Graduate T.E. students as % of T.E. students	00.0	01		0
20	Matriculated T.E. stud. as % of T. E. students	99.9	99		9
	JUVENILE DELINQUENCY RATES				
60	1960 rate per 1000 youth 7 to 20 yrs. of age	98.9	92		8
61	1966 rate per 1000 youth 7 to 20 yrs. of age	99.8	86		9
62	1966 rate as a per cent of 1960 rate	101	34		2
	DESCRIPTORS OFTEN CORRELATED WITH S.E. INDEX				
59	% of households with at least one automobile	17.8	15		1
05	% of Kinder. to 12th grade enrollees in priv. schl.	06.9	05		0
49	% of H.U. in structures with 10 or more H.U.	91.4	83		8
	DESCRIPTORS OFTEN NEGATIVELY CORRELATED WITH S.E. AND FAMILY STATUS INDEXES				
50	H.U. in structures with 4 or more floors, without elevators, as a % of housing units	90.4	99		9
37	Chn.under 18 not ch. of P.F.head as % of pop.un.18	11.9	84		5
45	% of H.U. with shared or no bathing facilities	00.7	30		1
46	% of hshlds. with 1.01 or more persons per room	25.2	94		9
47	Aver. no. of persons per room in households	.86	92		9
	DESCRIPTORS OFTEN NEGATIVELY CORRELATED WITH S.E. INDEX AND POSITIVELY WITH FAMILY INDEX				
55	Ratio of nonworkers of all ages to the L.F.	1.64	88		6
32	Persons in primary families per primary family	3.82	90		9
36	Fertility Ratio:Chn.under 5 per 1000 fem. 15 to 49	506	91		8
	INDICATOR OF GEOGRAPHIC MOBILITY				
43	% of hshld. heads moving to this H.U.1954 to 1960	33.2	72		6
	INDICATOR OF CHANGE IN HOUSING UNITS				
63	Estimate for period 19 0 to 19 7	-1.7	09		1

Note: See explanatory sheet for information on indexes, percentiles, map codes and key to abbreviations

03

EXPLANATORY SHEET ON AREA PROFILES

PURPOSE: The area profiles have been designed to provide data for specific areas or groups of areas concerning 50 variables which have been selected as likely to be useful in planning, administering and evaluating educational programs with particular emphasis on teacher education. In addition to reporting a ratio, an average or a per cent for each of the 50 variables, the profiles include percentiles and map codes which are described below. Bars are drawn for each of the variables to represent the percentiles graphically.

INDEXES: The Socio-Economic Index and Family Status Index were constructed on the basis of factor analyses done by high powered computers. The ten variables listed below the Socio-Economic Index were selected in such a way as to maintain high correlations between the variables at the borough as well as the city-wide level. Socio-Economic variables correlating with family status variables were excluded. The five variables listed under the Family Status Index were selected so as to have high correlations with each other at both the borough and city level, and to have low correlation with the variables in the Socio-Economic Index. The indexes were computed by averaging the percentile ranks of the variables in each index. Any negatively correlated variables used in either of the two indexes were complemented with the name of the variable adjusted to fit the complemented ratio or per cent.

RATIOS, PERCENTAGES AND AVERAGES: Most of the variables are presented as percentages with one decimal. Some of the variables are presented as rates per 1,000 population (e.g., T.E. students per 1,000 estimated population 18 to 27). Several variables are presented as medians (e.g., family income, years of schooling). Other variables are shown as mean averages (e.g., rooms per housing unit).

PERCENTILES: Arrays or rank order listings were made of the ratios or averages for each of the 50 variables. The area with the lowest ratio appears at the top of each list and the highest ratio at the bottom of the list. The three lowest ratios were coded as 00, while the highest three were coded as 99. Intermediate ratios were assigned appropriate percentiles systematically. In the case of five or more ratios having exactly the same value, they were each assigned the same percentile code. Percentiles were selected for use in this study because they provide the most satisfactory means of making comparisons between variables with highly skewed distributions. A table showing measures of skewness is presented in the appendix to the study report.

MAP CODE: This was developed to facilitate the production of maps depicting the geographic patterning of the areas in accordance with particular variables. For all but six variables, the arrays were studied to select eight sets of class limits with equal class intervals. For each variable the 0 and 9 groups were handled as open-end classes. In the case of the six variables related to percentages based on data for non-whites and Puerto-Ricans, identical geometric class intervals and limits were used. The map pertaining to each variable shown in the Health Area Profiles may be located by means of the variable number which is also used as the map number for the Bronx-Manhattan-Richmon Boroughs and for the Brooklyn-Queens Boroughs. Each map has a key which shows the number of Health Areas in each of the 10 classes, the class limits of classes 1 to 8, the upper limit for class 0, and the lower limit for class 9.

Bars have been drawn to indicate graphically the number of areas in each class. The names of streets bounding each Health Area as well as the official numerical designation of each area are presented in the 17 x 22 inch index map.

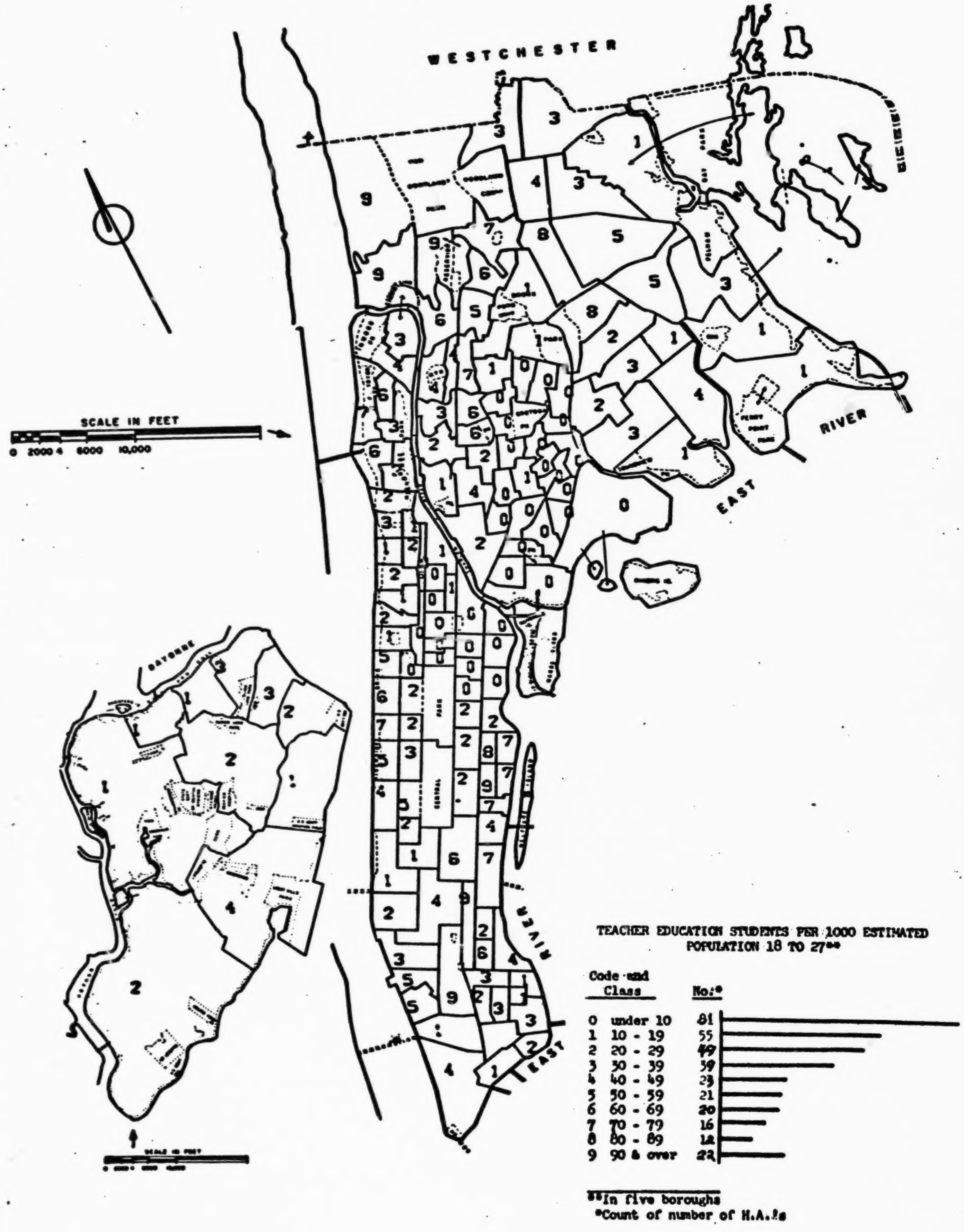
ABBREVIATIONS: Because of space limitations in the profiles use has been made of the following abbreviations:

Aver.	Average	H.U.	Housing unit	Sec.	Secondary
Chn.	Children	L.F.	Labor Force	S.E.	Socio-economic
Elem.	Elementary	Pop.	Population	Stud.	Student
Euro.	Europe	Priv.	Private	T.E.	Teacher Education
Fem.	Female	P.R.	Puerto Rican	Tchrs.	Teachers
Hshld.	Household			Wkrs.	Workers
				Yrs.	Years

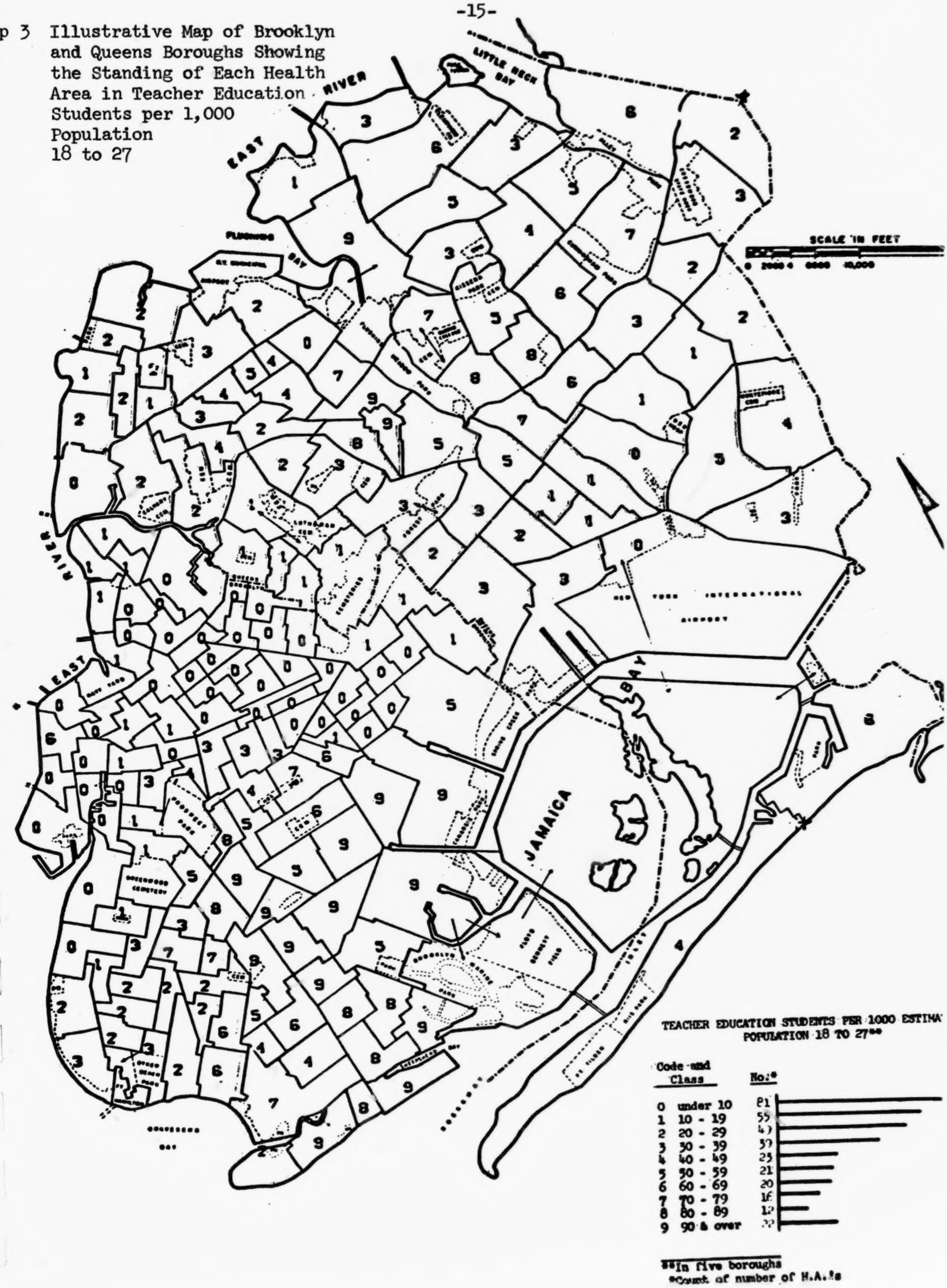
SOURCES: Most of the variables (33) are based on data collected ~~by~~ in the 1960 U.S. Census and made available to the Department of City Planning in the form of magnetic tapes. Aggregations of the census tract counts were made to the Health Area level by the City Planning Department and the various ratios, averages and percentages were computed. The detailed tables showing these data for Health Area were xeroxed and cards were key punched for selected variables by the Office of Administrative Studies, Division of Teacher Education, City University. The following sources were used for the indicated variables:

	Source	Variable numbers
1.	New York City Youth Board	60, 61, 62
2.	New York City Department of Health	28, 29, 30, 31
3.	Teacher Education Census, City University, Spring 1968	7, 8, 9, 15, 19, 20
4.	Department of City Planning analysis of Sanborn Atlas data	63

Map 2 Illustrative Map of Manhattan, Bronx and Richmond Boroughs Showing the Standing of Each Health Area in Teacher Education Students per 1,000 Population 18 to 27


WESTCHESTER
SCALE IN FEET
0 2000 4 6000 10,000
EAST RIVER
RIVER
EAST
BAYONNE
SCALE IN FEET
TEACHER EDUCATION STUDENTS PER 1000 ESTIMATED POPULATION 18 TO 27**
Code and Class
No.*
0 under 10 81
1 10 - 19 55
2 20 - 29 49
3 30 - 39 39
4 40 - 49 23
5 50 - 59 21
6 60 - 69 20
7 70 - 79 16
8 80 - 89 12
9 90 & over 22
**In five boroughs
*Count of number of H.A.'s

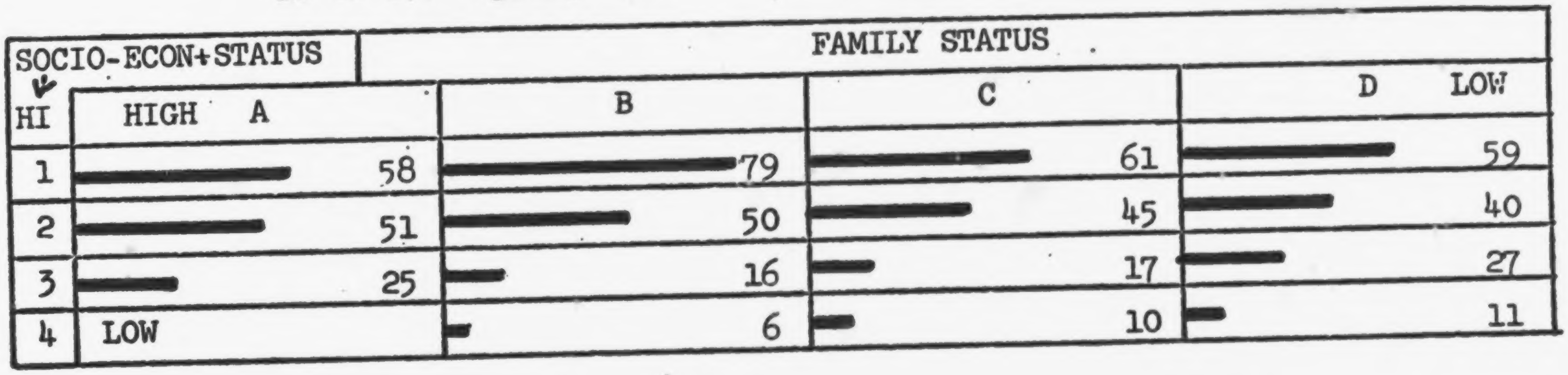
ap 3 Illustrative Map of Brooklyn and Queens Boroughs Showing the Standing of Each Health Area in Teacher Education Students per 1,000 Population 18 to 27


EAST RIVER
LITTLE NECK BAY
FLUSHING BAY
SCALE IN FEET
0 2000 4 6000 10,000
NAVY YARD
GREENWOOD CEMETERY
PROSPECT PARK
NEW YORK INTERNATIONAL AIRPORT
JAMAICA BAY
FLOYD BENNETT FIELD
GRAVESEND BAY
TEACHER EDUCATION STUDENTS PER 1000 ESTIMA
POPULATION 18 TO 27**
Code and Class
No.*
0 under 10 81
1 10 - 19 55
2 20 - 29 47
3 30 - 39 37
4 40 - 49 25
5 50 - 59 21
6 60 - 69 20
7 70 - 79 16
8 80 - 89 12
9 90 & over 22
**In five boroughs
*Count of number of H.A.'s

Chapter 2 Variation Between the 15 types of areas in Key Variables Such as Participation in Teacher Education

To introduce the extensive information now available on the relationship between participation in teacher education and environmental characteristics, use is being made of a series of small charts showing differences between the 15 types of areas in selected variables. For example, Chart 2 (below) shows that the highest average Teacher Education enrollment ratio (79 per 1,000 persons 18 to 27) was in type 1B (line 1, column B). The lowest ratio (6) is reported in type 4B (line 4, column B). Dividing 79 by 6 it is apparent that in the type 1B areas there was 13 times as large a proportion enrolled in Teacher Education in City University as in the type 4B areas. These ratios represent weighted averages of the component Health Area ratios calculated by a computer. Readers interested in the size of each type may turn back to Table 4. From the tables it is evident that in type 1B there were 14 Health Areas with a total 1960 population of 341,000. Type 4B summarizes 26 Health Areas with a total population of 538,000.

Chart 2. Teacher Education Students Enrolled in Senior Colleges of City University per 1000 Estimated Population 18 to 27: Spring 1968



SOCIO-ECON+STATUS ↓	FAMILY STATUS			
HI	HIGH A	B	C	D LOW
1	58	79	61	59
2	51	50	45	40
3	25	16	17	27
4	LOW	6	10	11

A glance at Chart 2 reveals that within each column based on the Family Status Index there is a regular gradient in the Teacher Education enrollment rates from the first or highest level down to the 4th or lowest level. However, there is no such gradient between columns. We may therefore conclude that there is no significant correlation between the Teacher Education enrollment rates and the Family Status Index. This means that the Socio-Economic Index is a good predictor of enrollment in Teacher Education at City University and that Family Status is a poor predictor.

A somewhat different pattern is shown by Chart 3 in relation to the per cent of Teacher Education students enrolled in graduate studies. There is a strong gradient in the socio-economic dimension together with a somewhat weaker gradient in the family status dimension. Since graduate students in Teacher Education at City University are usually enrolled on a part-time basis it was found that the chart for part-time students had a very similar pattern to that in Chart 3. This patterning is explained by the fact that Queens Borough Health Areas tend to be high in the Family Status Index while Manhattan areas are low in this index. Part-time students as well as graduate students tend to live in areas with high population density and small households such as are found in Manhattan and to some extent in Brooklyn and the Bronx.

Chart 3 Students Enrolled in Graduate Teacher Education in Senior Colleges of City University as a Per Cent of All Teacher Education Students: Spring 1968

SOCIO-ECON+STATUS	FAMILY STATUS			
HI	HIGH A	B	C	D LOW
1	34.1	39.7	40.8	45.3
2	30.9	29.4	32.4	41.0
3	31.6	24.8	28.8	41.7
4	LOW	18.1	20.8	31.0

The extreme differences between the type 1B and type 4B areas as well as the slightly lower gradients between the rows in Chart 2, point up a need for carefully planned program experiments utilizing readily available data as a point of departure. In an increasingly rational urban society we should be able to make changes which would reduce the ratio of 13 to 1 in the participation of different strata of the New York City population in Teacher Education. One of the first questions concerns the extent to which similar differentials are present in other variables.

Chart 4 presents data on the percentage of the population over 25 years of age or over who had completed high school. The highest percentage (61.3) was found in type 1D while the lowest percentage (17.5) was in type 4B. This was a difference ratio of only 35 to 1. However, this cannot be compared directly to the per cent in Teacher Education since the base is the entire population 25 years and over as contrasted with the 18 to 27 year old population used in computing the Teacher Education percentage.

Chart 4 Per Cent of Population 25 Years of Age or Over with 12 or More Years of Schooling: 1960

SOCIO-ECON. STATUS	FAMILY STATUS			
HI	HIGH A	B	C	D LOW
1	49.0	50.9	46.4	61.3
2	36.5	38.0	39.6	47.5
3	27.2	26.0	29.0	36.7
4 LOW		17.5	19.9	23.3

A somewhat more comparable measure of differences in educational participation is presented in Chart 5. Although this is based on 1960 data and hence somewhat outdated it provides a rough indication of differences existing at that time in the per cent of persons 15 to 24 who were enrollees in college. Just as in Chart 4 we find that the highest per cent is indicated for the type 1D areas (33.5) and the lowest for the type 4B areas (5.3). The difference ratio between these two extreme values is 6.3. This chart shows a strong gradient in the socio-economic index and a somewhat weaker gradient in the family status index.

Chart 5 Enrollees in College as a Per Cent of Population 15 to 24: 1960

SOCIO-ECON. STATUS	FAMILY STATUS			
HI	HIGH A	B	C	D
1	21.3	28.0	26.8	33.5
2	17.0	21.1	24.8	22.9
3	10.7	11.3	14.1	14.0
4 LOW		5.3	5.6	6.6

Another indicator of educational influences which would tend to increase participation in Teacher Education is the ratio of elementary and secondary school teachers per 1,000 workers in the labor force, presented in Chart 6. Conceivably, areas with a relatively high ratio of resident school teachers would have values and other influences tending to increase participation in Teacher Education. In Chart 6 we find just as in Chart 2 that the highest ratio is exhibited for type 1B (29) while the lowest ratios are exhibited for types 4C and 4D (4). This results in a difference ratio of 7.2 which is higher than the difference ratio of 6.3 reported for college enrollees but still substantially lower than the difference ratio of 13 reported for Teacher Education enrollment.

Chart 6 Elementary and Secondary School Teachers per 1000 Workers in the Labor Force: 1960

SOCIO-ECON+STATUS	FAMILY STATUS			
HI	HIGH A	B	C	D LOW
1	25	29	26	19
2	16	19	20	13
3	9	8	11	10
4	LOW	6	4	4

Although only partial data were available on the number of City University senior college students not enrolled in teacher education, it is possible to estimate difference ratios by the data in Chart 7. There was a difference ratio of 9 to 0 between the ratio of 101 for the type 1D areas and the ratio of 11 for the type 4B areas. Accordingly, it seems reasonable to assume that the difference ratio of 13 in educational participation registered for teacher education students is not unreasonably high.

Chart 7 Non-Teacher Education Students Enrolled in Senior Colleges of City University per 1000 Estimated Population 18 to 27: Spring 1968

SOCIO-ECON. STATUS	FAMILY STATUS			
HI	HIGH A	B	C	D
1	62	89	83	101
2	57	67	65	68
3	39	25	27	44
4	LOW	11	15	21

It would seem quite obvious to include at least one indicator in income levels among the 15 types of areas so as to facilitate comparisons between income and educational participation. Chart 8 shows that only 5.3 per cent of the families in type 4C areas had annual incomes in 1959 over $10,000. At the other extreme 39.6 per cent of the families in type 1D areas had incomes over $10,000. This resulted in a difference ratio of 7.5 between the ratios in the highest and lowest types of areas. It should be noted that there is an extremely sharp gradient shown between the rows in this chart with practically no gradient with respect to the columns (Family Status).

Chart 8 Per Cent of Families with 1959 Incomes Over $10,000

SOCIO-ECON. STATUS	FAMILY STATUS			
HI	HIGH A	B	C	D
1	29.3	30.7	29.3	39.6
2	18.6	18.8	17.6	22.1
3	14.2	11.6	11.8	11.4
4	LOW	5.7	5.3	5.6

Inadequate housing plays an important role in limiting the participation of young adults in Teacher Education. Small and overcrowded housing units interfere with home study. Overcrowding is commonly measured by the per cent of households with more than one person per room. Chart 9 indicates that type 1D areas had the lowest percentage of overcrowded households (6.7) while type 4B areas had the highest percentage (23.1). This resulted in a difference ratio of 3.4.

Chart 9 Per Cent of Households with More Than One Person per Room: 1960

SOCIO-ECON. STATUS	FAMILY STATUS			
HI	HIGH A	B	C	D
1	6.9	7.9	8.0	6.7
2	9.3	10.3	10.8	12.1
3	12.7	11.3	13.7	13.7
4	LOW	23.1	22.2	20.4

The condition of the housing is a deterrent to effective participation in Teacher Education. Chart 10 shows that 50 per cent of the housing units in the type 4D areas were deteriorating or dilapidated as contrasted with only 2.6 per cent in the type 1A areas. This resulted in a difference ratio of over 19 to 1 between the two types of areas. It is quite possible that conditions have deteriorated further in the lower income areas since 1960.

Chart 10 Per Cent of Housing Units in a Deteriorating or Dilapidated Condition: 1960
(Complement of Corresponding Variable in Profiles and Socio-Economic Index)

SOCIO-ECON.STATUS	FAMILY STATUS			
↓ HI	HIGH A	B	C	D LOW
1	2.5	2.9	3.9	8.6
2	6.2	5.9	6.5	13.4
3	8.3	13.3	14.6	27.7
4	LOW	35.3	31.6	50.0

Another more objective indicator of poor housing is the percentage of households with shared or no bathing facilities. In Chart 11 the type 4D areas appear to have the highest percentage of households with shared or no bathing facilities (23.6) while the type 1A areas had the lowest percentage (0.6). This results in a difference ratio of 19 to 1 between the two types of areas. It will be noted that this chart shows a fairly strong gradient in both of the two indexes.

Chart 11 Per Cent of Households with Shared or No Bathing Facilities: 1960

SOCIO-ECON.STATUS	FAMILY STATUS			
↓ HI	HIGH A	B	C	D LOW
1	0.6	0.7	1.3	9.6
2	2.0	2.6	1.7	14.7
3	1.5	4.2	4.4	16.7
4	LOW	7.9	7.4	23.6

Perhaps more fundamental than the foregoing physical factors limiting participation in Teacher Education and particularly the educational foundations in earlier years of schooling, are the factors related to the structure of the family unit in low income areas. Chart 12 shows that in the type 4D areas more than a third of the households were headed by a female (34.1 per cent) as contrasted with 13.5 per cent in the type 2A areas.

Chart 12 Households with a Female Head as a Per Cent of Households: 1960
(Complement of Corresponding Variable in Profiles
and Family Status Index)

SOCIO-ECON. STATUS	FAMILY STATUS			
HI	HIGH A	B	C	D LOW
1	17.7	17.8	21.7	33.9
2	13.5	18.4	23.3	30.8
3	14.7	19.8	23.9	33.4
4	LOW	21.7	26.7	34.0

In recent years many writers have pointed up the disadvantages to children and young people resulting from having an incomplete female headed household as contrasted with having both a father and a mother in the home. In the truncated family the young person is frequently pressured into leaving home or going to work thereby reducing the likelihood of continuing with education or vocational training.

Another factor weakening the effectiveness of the family unit is the practice of unofficially passing children on to neighbors or relatives. Some indication of the extent of this practice is provided by the data in Chart 13. In the type 4D areas 16.9 per cent of the children under 18 were living in a home headed by somebody other than the child's own parent. By way of contrast only 4.1 per cent of the children in type 1B areas were similarly classified. The difference ratio was more than 4 to 1.

Chart 13 Per Cent of Children Under 18 Living in a Family Headed by Someone Other Than Their Own Parent: 1960

SOCIO-ECON. STATUS	FAMILY STATUS			
↓ HI	HIGH A	B	C	D
1	4.8	4.1	4.2	6.2
2	5.6	5.3	4.7	7.3
3	7.8	5.6	7.0	13.5
4	LOW	6.5	11.0	16.9

An excessive number of children in the family can be a factor limiting the chances of a youngster completing his education. Chart 14 provides information on differentials in "fertility ratio".* These ratios are expressed as the number of children under 5 years of age per 1,000 women 15 to 49 years of age. Type 4D areas had a fertility ratio of 518 as contrasted with 197 in type 1D areas.

Chart 14 FERTILITY RATIO: Children Under 5 per 1000 Females 15 to 49: 1960

SOCIO-ECON. STATUS	FAMILY STATUS			
↓ HI	HIGH A	B	C	D LOW
1	366	311	292	197
2	385	330	303	282
3	410	372	372	289
4	LOW	518	461	365

---

*In the 1960 U.S. Census report entitled General Population Characteristics the "fertility ratio" is described as "a rough index of the natural growth tendencies of various population groups. The ratio, which is computed from age distributions of the population, provides the longest series of fertility statistics available for the United States". This Census report indicates that in 1960 for the U.S. as a whole a fertility ratio of about 291 would have been adequate for the replacement of the population. The actual ratio nationally was 488 while in New York City it was 356. (page xiii)

The burden resulting from too many children in relation to the employed adults in the family is suggested by Chart 15. In type 4B areas there were 1.75 non-workers (child or adult) per person in the labor force. By way of contrast type 1D areas had only .76 non-workers for each person in the labor force. It would seem evident that the burden of an excess number of children in relation to the number of wage earners in the home may reduce the likelihood of young people completing high school and going on to college.

Chart 15 Ratio of Nonworkers of All Ages to the Labor Force: 1960

SOCIO-ECON. STATUS	FAMILY STATUS			
HI	HIGH A	B	C	D
1	1.45	1.16	1.06	.76
2	1.44	1.25	1.10	.86
3	1.55	1.29	1.32	.90
4	LOW	1.75	1.52	1.15

In relation to the factors outlined which tend to limit the participation in Teacher Education no mention has yet been made of ethnicity. Chart 16 shows the percentage of the population classified as nonwhite or Puerto Rican in the 1960 Census. It is evident that there is a strong gradient in relation to socio-economic status and a noticeable but less pronounced gradient in terms of family status. Since there have been substantial increases since 1960 in the percentage of nonwhites and Puerto Ricans these figures must be looked upon as approximate and minimal. A comparison of Chart 16 with Chart 2 showing the ratio of persons 18 to 27 enrolled in Teacher Education suggests an inverse relationship. In other words, the types of areas with high participation in Teacher Education tend to have low percentages of nonwhites and Puerto Ricans. Conversely the types of areas with high percentages of nonwhites and Puerto Ricans register low participation in Teacher Education. A promising trend lies in the evidence supplied by this chart that the nonwhites and Puerto Ricans are becoming established to a lesser or greater extent in each of the 15 types of areas.*

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*See Maps 9 and 10 and Appendix 5 for more current data on ethnicity.

Chart 16 Per Cent of Population Nonwhite or Puerto Rican: 1960

SOCIO-ECON. STATUS	FAMILY STATUS			
↙ HI	HIGH A	B	C	D
1	3.2	1.7	2.1	6.2
2	6.4	11.0	6.1	16.6
3	9.9	11.4	24.9	50.7
4	LOW	44.0	62.1	71.7

Efforts to recruit Puerto Rican and nonwhite youth for enrollment in Teacher Education programs might be most effective in the higher socio-economic status areas. By selecting areas which have sizeable concentrations of the ethnic minorities as well as relatively high socio-economic status the chances would be greater for recruiting Teacher Education enrollees than would be the case in the rock bottom economic areas.

Indications of the incidence of deviant behaviors many of which are in direct conflict with the goals of Teacher Education are shown in Chart 17. With the exception of the bottom stratum in this chart there is a direct gradient in both the Family Status and Socio-Economic dimensions. The lowest delinquency rate was 17.3 in the type 1A areas while the highest rate (100.2) was in the type 4C areas. The difference ratio between these two rates was approximately 5.8 to 1.

Chart 17 Juvenile Delinquency Rate per 1000 Youth 7 to 20 Years of Age: 1966 Level

SOCIO-ECON. STATUS	FAMILY STATUS			
↙ HI	HIGH A	B	C	D
1	17.3	18.2	21.5	29.2
2	32.7	33.6	37.4	54.4
3	38.8	63.0	73.0	80.0
4	LOW	91.8	100.2	98.4

Chapter 3 Use of Area Profiles in Obtaining a Quick Picture of 50 Variables in Two Illustrative Types of Areas and Two Health Areas

Up to this point the report has focussed on specific variables displayed in terms of the 15 types of areas. While this approach is useful for some purposes, it needs to be supplemented by the careful examination of a specific Health Area using the 50 variables displayed in the area profiles as a point of departure. Normally, the Health Area display is viewed in one dimension with one set of 50 bars portraying the standing of the area in terms of each of the variables. The length of each bar is determined by the percentile ranking of the particular variable which in turn indicates the per cent of Health Areas with smaller percentages, ratios or averages.

Ideally the Health Area profile should be examined along with the profile for the "parent" type of area profile. It is then possible to determine the extent to which the particular Health Area deviates from the profile for the type of area in which it belongs.

To illustrate this mode of analysis we have prepared two special profiles, each one containing two sets of bars. The first set of bars is solid and is based on the percentiles in the type of area profile. The second set of bars is broken and is based on the percentiles for the illustrative Health Area profile selected to represent the deviations from the type of area profile.

We start with the type 4D profile accompanied by one of its component Health Areas, in this case Health Area 16 in Manhattan. Its boundaries are Fifth Avenue on the west, 119th Street on the south, Third Avenue on the east, and Harlem River on the north. Its 1960 population was 33,154. The Type of Area with which this Health Area is associated (4D) had a 1960 population of 517,000 and it includes 25 Health Areas.

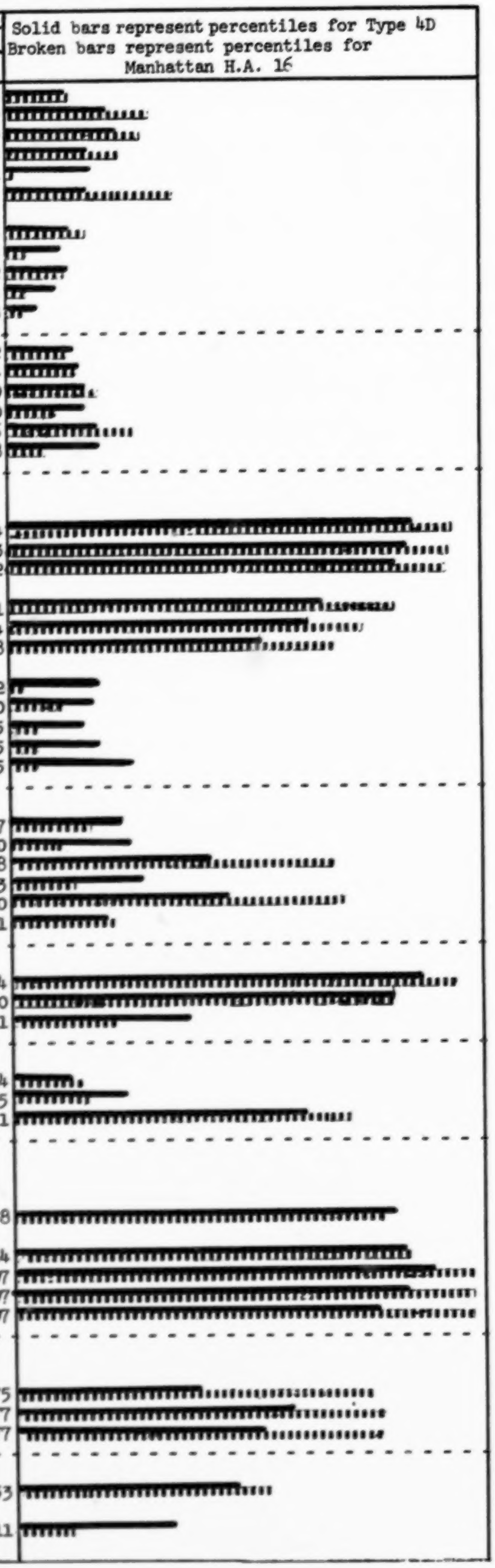
An examination of Chart 18 (the profile chart representing the percentiles for type 4D and Health Area 16 in Manhattan) reveals that on the whole the two sets of bars are quite similar in length. One would expect this since many of the variables are highly correlated with each other, and the percentiles used in drawing the bars for the Health Area profiles are averaged together to get the percentiles for the type of area.

If it is desired to determine the specific variables which are deviant and the degree of their deviancy from the type profile, this can be easily accomplished.

CHART 18

PROFILE OF 50 VARIABLES REPRESENTED AS PERCENTILES FOR TYPE OF AREA 4D AND HEALTH AREA 16 IN MANHATTAN BOROUGH

Var. No.	Description of Variables	%, ratio Type 4D	%, ratio Man. 16	Percentile T	Percentile M
	SOCIO-ECONOMIC INDEX (based on 10 variables below)	15.0	15.0	12	13
03	Median yrs. of school completed by pop. 25 or over	8.7	8.9	21	30
01	% of pop.25 or over with 12 yrs. or more of school	23.3	25.3	23	28
02	% of pop.25 or over with 8 yrs. or more of school	63.0	65.7	17	23
04	Enrollees in college as % of pop. 15 to 24	6.6	1.8	18	01
06	Elem. & sec. schl. tchrs. per 1000 wkrs. in L.F.	4	8	17	35
51	Professional, managerial, clerical and sales workers as per cent of employed workers	24.7	25.9	13	16
58	Median family income for the year 1959	4253	3930	11	04
57	% of families with 1959 incomes over $10,000	5.6	5.3	13	12
56	% of families with 1959 incomes over $3,000	69.8	67.0	10	04
44	% of H.U. not in a deter. or dilapidated condit.	49.9	48.6	06	03
	FAMILY STATUS INDEX (based on 5 variables below)	17.1	15.2	14	12
40	% of hshlds. with 2 or more persons per hshld.	69.6	70.2	15	14
39	Related individuals as a % of the population	80.4	84.9	16	19
52	Hshlds. with a male head as a % of households	65.9	65.0	16	10
53	Females not in L.F. as % of females 14 or over	52.3	56.5	19	26
48	Average no. of rooms per occupied housing unit	3.45	3.08	20	08
	ETHNICITY INDICATORS				
	Nonwhites (except Puerto Rican nonwhites)				
26	Nonwhite persons as % of 1960 population	59.7	76.1	85	94
28	Nonwhite births as % of 1960 resid. live births	62.4	76.1	84	93
29	Nonwhite births as % of 1966 resid. live births	63.9	79.7	82	92
	Puerto Ricans (both white and nonwhite)				
27	P.R. persons as % of 1960 population	12.0	15.8	66	81
30	P.R. births as % of 1960 resident live births	21.9	21.7	63	74
31	P.R. births as % of 1966 resident live births	20.0	17.0	58	68
25	Foreign Stock (foreign born, or native with for. or mixed parentage) as % of total population	25.1	10.4	19	02
21	Northwest Eur. & Canada (Norway, Sweden, UK, Ireland)	2.4	1.1	18	10
22	Central Eur. (Austria, Czecho., Germany & Hungary)	2.6	0.7	16	05
23	Eastern Eur. (Poland & USSR) as % of total pop.	4.2	0.3	19	05
24	Southern Eur. (Italy) as % of total population	5.6	0.5	26	05
	CUNY TEACHER EDUCATION CENSUS DATA - SPRING 1968				
07	T.E. students per 1000 est. pop. 18 to 27	1.1	0.6	23	17
08	Non-T.E. students per 1000 est. pop. 18 to 27	2.1	0.7	25	10
09	T.E. stud. as % of all stud. in Senior Colleges	37.7	43.8	42	68
15	Full-time T.E. stud. as % of T.E. students	28.9	21.9	28	13
19	Graduate T.E. students as % of T.E. students	31.0	37.5	46	70
20	Matriculated T.E. stud. as % of T.E. students	51.8	56.3	20	21
	JUVENILE DELINQUENCY RATES				
60	1960 rate per 1000 youth 7 to 20 yrs. of age	96.8	104.1	87	94
61	1966 rate per 1000 youth 7 to 20 yrs. of age	98.4	89.2	81	80
62	1966 rate as a per cent of 1960 rate	107	86	37	21
	DESCRIPTORS OFTEN CORRELATED WITH S.E. INDEX				
59	% of households with at least one automobile	16.6	17.5	12	14
05	% of Kinder. to 12th grade enrollees in priv. schl.	16.2	11.5	24	15
49	% of H.U. in structures with 10 or more H.U.	66.2	81.0	62	71
	DESCRIPTORS OFTEN NEGATIVELY CORRELATED WITH S.E. AND FAMILY INDEXES				
50	H.U. in structures with 4 or more floors, without elevators, as a % of housing units	60.4	53.6	81	78
37	Children under 18 yrs. not child of primary family head, as per cent of population under 18	16.9	12.0	83	84
45	% of H.U. with shared or no bathing facilities	23.6	32.1	89	97
46	% of hshlds. with 1.01 or more persons per room	20.4	27.9	83	97
47	Aver. no. of persons per room in households	0.79	0.92	77	97
	DESCRIPTORS OFTEN NEGATIVELY CORRELATED WITH S.E. INDEX AND POSITIVELY WITH FAMILY INDEX				
55	Ratio of nonworkers of all ages to the Labor Force	1.15	1.43	39	75
32	Persons in primary families per primary family	3.46	3.63	59	77
36	Fertility Ratio: Chn. under 5 per 1000 fem. 15 to 49	365	429	52	77
	INDICATOR OF GEOGRAPHIC MOBILITY				
43	% of hshld. heads moving to this H.U. before 1954	48.7	49.6	47	53
	INDICATOR OF CHANGE IN HOUSING UNITS				
63	Estimates for period 1960 to 1967	3.4	-1.3	33	11


Solid bars represent percentiles for Type 4D
Broken bars represent percentiles for Manhattan H.A. 16

First, considering the variables in the Socio-Economic Index, there was a fairly close conformity between the type and Health Area bars in eight of these components. However, Health Area 16 had a percentile ranking of only 01 in variable 04 - "Enrollees in College as per cent of population 15 to 24". This variable had a percentile ranking of 18 in the type 4D profile. This means that the area was way below "par" in college enrollees in 1960. On the other hand, it was way above "par" in variable 06 - "Elementary and secondary school teachers per 1,000 workers in the labor force". If it is desired to determine the differentials between the Health Area and its type in terms of the absolute per cent or ratio, the data will be found in the first pair of columns.

There was fairly close correspondence between the percentile bars for the five Family Status variables for the Health Area and the type. The greatest difference was noticeable in variable 48 - "Average number of rooms per occupied housing units". The percentile for the type was 20 and for the Health Area 08. This means that the Health Area had significantly fewer rooms per housing unit than the average for the type.

The ethnicity indicators show that the Health Area was above the type of area in the percentage of nonwhites and Puerto Ricans (variables 26 through 31). However, the type of area was higher than the Health Area in the per cent of the population in the Foreign Stock as well as in the four sub-groupings of the Foreign Stock (variables 21 to 25).

In the section of the profile displaying data on the "CUNY Teacher Education Census", the percentile bars for the Health Area were considerably higher than those for the type of area in variables 09 and 19. On the other hand, they were substantially below the type of area averages with respect to variables 08, 15 and 20.

With regard to juvenile delinquency rates, Health Area 16 was above the percentile for the type of area in relation to the 1960 rate, but it was quite close to the type in 1966. As a result, the percentile for the extent of change in the delinquency rate was below the type average.

The selected Health Area was above the type average in relation to variables 46, 47, 55, 32 and 36 while it was below the type average in variable 63.

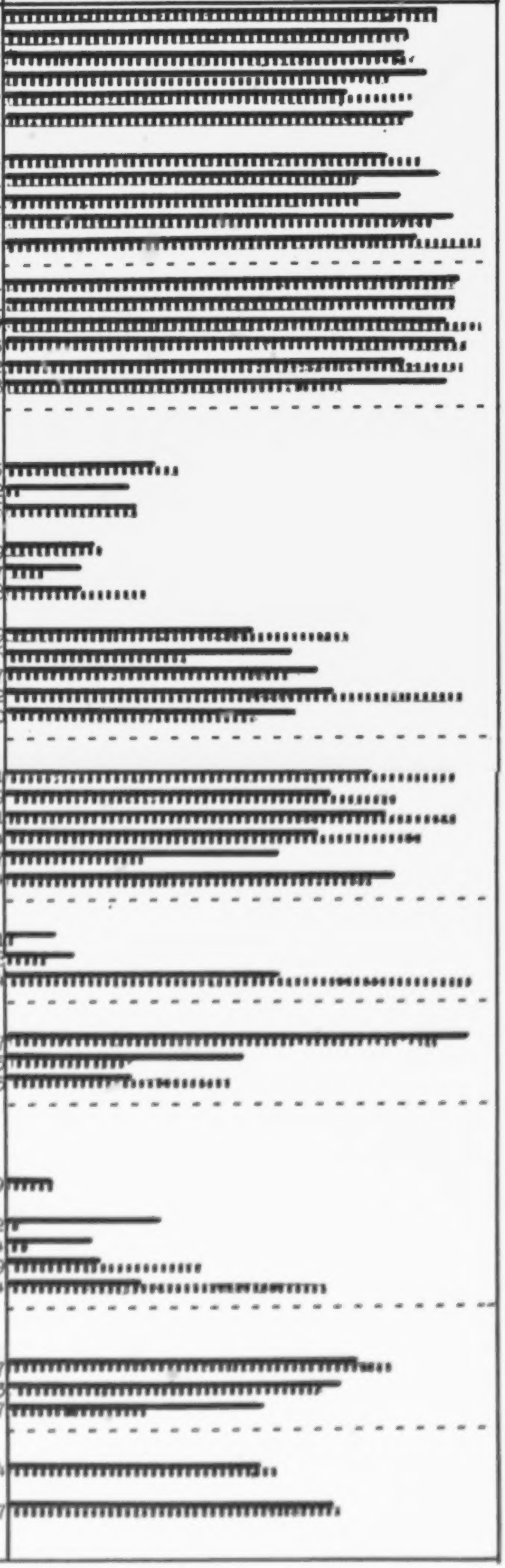
Turning to Chart 19 displaying the two sets of bars for each of the 50 variables relating to Health Area 87.22 in Brooklyn, we find a high degree of correspondence in the percentile bars for the variables used in establishing the Socio-Economic and Family Status Indexes.

CHART 19

PROFILE OF 50 VARIABLES REPRESENTED AS PERCENTILES FOR TYPE OF AREA 1A AND HEALTH AREA 87.22 IN BROOKLYN BOROUGH

Var. No.	Description of Variable	%, ratio Type 1A	 Bkl. 87.22	Percentile T	 B
	SOCIO-ECONOMIC INDEX (based on 10 variables below)	82.1	81.1	87	87
03	Median yrs. of school completed by pop. 25 or over	11.6	11.6	81	81
01	% of pop.25 or over with 12 yrs. or more of school	49.0	47.3	81	82
02	% of pop.25 or over with 8 yrs. or more of school	88.1	85.9	85	77
04	Enrollees in college as % of pop. 15 to 24	21.3	25.0	69	82
06	Elem. & sec. schl. tchrs. per 1000 wkrs. in L.F.	25	23	82	81
51	Professional, managerial, clerical and sales workers as per cent of employed workers	59.6	61.5	77	84
58	Median family income for the year 1959	7789	6830	87	71
57	% of families with 1959 incomes over $10,000	29.3	22.3	80	71
56	% of families with 1959 incomes over $3,000	93.8	92.3	91	86
44	% of H.U. not in a deter. or dilapidated condit.	97.4	99.5	83	96
	FAMILY STATUS INDEX (based on 5 variables below)	87.8	87.8	92	91
40	% of hshlds. with 2 or more persons per hshld.	93.5	92.9	91	91
39	Related individuals as a % of the population	96.7	97.6	89	96
52	Hshlds. with a male head as a % of households	89.2	89.5	91	93
53	Females not in L.F. as % of females 14 or over	68.0	70.4	81	92
48	Average no. of rooms per occupied housing unit	5.16	4.45	89	68
	ETHNICITY INDICATORS				
	Nonwhites (except Puerto Rican nonwhites)				
26	Nonwhite persons as % of 1960 population	2.8	1.5	30	35
28	Nonwhite births as % of 1960 resid. live births	3.4	0.2	25	02
29	Nonwhite births as % of 1966 resid. live births	8.1	2.8	26	26
	Puerto Ricans (both white and nonwhite)				
27	P.R. persons as % of 1960 population	0.4	0.4	18	19
30	P.R. births as % of 1960 resident live births	0.5	0.2	15	07
31	P.R. births as % of 1966 resident live births	0.9	1.5	15	28
25	Foreign Stock (foreign born, or native with for. or mixed parentage) as % of total population	51.4	57.3	50	69
21	Northwest Eur.& Canada (Norway, Sweden, UK, Ireland)	8.5	4.5	58	36
22	Central Eur. (Austria, Czecho., Germany & Hungary)	10.4	9.4	63	57
23	Eastern Eur. (Poland & USSR) as % of total pop.	15.8	29.0	66	92
24	Southern Eur. (Italy) as % of total population	10.4	8.3	58	50
	CUNY TEACHER EDUCATION CENSUS DATA - SPRING 1968				
07	T.E. students per 1000 est. pop. 18 to 27	5.8	8.2	74	91
08	Non-T.E. students per 1000 est. pop. 18 to 27	62	79	66	79
09	T.E. stud. as % of all stud. in Senior Colleges	48.1	51.0	77	91
15	Full-time T.E. stud. as % of T.E. students	46.9	55.2	63	84
19	Graduate T.E. students as % of T.E. students	34.1	24.7	55	27
20	Matriculated T.E. stud. as % of T.E. students	83.9	79.5	79	74
	JUVENILE DELINQUENCY RATES				
60	1960 rate per 1000 youth 7 to 20 yrs. of age	11.5	5.2	10	01
61	1966 rate per 1000 youth 7 to 20 yrs. of age	17.3	13.1	14	08
62	1966 rate as a per cent of 1960 rate	151	252	56	94
	DESCRIPTORS OFTEN CORRELATED WITH S.E. INDEX				
59	% of households with at least one automobile	81.3	70.7	94	87
05	% of Kinder. to 12th grade enrollees in priv. schl.	28.4	16.5	48	25
49	% of H.U. in structures with 10 or more H.U.	21.6	43.8	25	45
	DESCRIPTORS OFTEN NEGATIVELY CORRELATED WITH S.E. AND FAMILY INDEXES				
50	H.U. in structures with 4 or more floors, without elevators, as a % of housing units	1.1	0.4	09	09
37	Children under 18 yrs. not child of primary family head, as per cent of population under 18	4.8	2.4	31	02
45	% of H.U. with shared or no bathing facilities	0.6	0.1	17	04
46	% of hshlds. with 1.01 or more persons per room	6.9	9.7	19	39
47	Aver. no. of persons per room in households	0.65	0.74	27	64
	DESCRIPTORS OFTEN NEGATIVELY CORRELATED WITH S.E. INDEX AND POSITIVELY WITH FAMILY INDEX				
55	Ratio of nonworkers of all ages to the Labor Force	1.45	1.45	71	77
32	Persons in primary families per primary family	3.53	3.47	67	63
36	Fertility Ratio: Chn. under 5 per 1000 fem. 15 to 49	366	305	52	27
	INDICATOR OF GEOGRAPHIC MOBILITY				
43	% of hshld. heads moving to this H.U. before 1954	50.0	49.9	51	54
	INDICATOR OF CHANGE IN HOUSING UNITS				
63	Estimates for period 1960 to 1967	13.3	9.1	66	67

Solid bars represent percentiles for Type 1A
Broken bars represent percentiles for Brooklyn H.A. 87.22



The major exceptions were in variable 58 - "Median family income for 1959" and variable 57 - "Per cent of families with incomes over $10,000". In each instance, the illustrative Health Area was below the type average.

In Chart 19, data were used for type 1A and Health Area 87.22 in Brooklyn. The boundaries of this Health Area are so complex that the index map should be consulted by those who are interested in its exact boundaries. Generally, it is southwest of the Brooklyn Marine Park. One of its bounding streets is Gerritsen Avenue on the northeast and Ocean Avenue on the southwest. It had a 1960 population of 36,194. It is one of the 30 areas in type 1A which had a 1960 population of 774,000. The profile for the particular Health Area shows that this area had a considerably higher percentage of foreign stock than its type. The particular foreign group in which it exceeded the type average was "Eastern European (Poland and USSR)".

The area was also outstanding in having a higher ratio than the type in both Teacher Education students and non-Teacher Education students. It had an unusually high percentage of full-time Teacher Education students but a lower percentage of graduate Teacher Education students than the type. Actually, this pattern would be expected since there are very few full-time graduate students.

The reader should, by this time, have discovered how to use the profile charts. By a similar use of the profile chart for the type and the profile for a particular area, the user should be able to obtain the equivalent of having both sets of bars on the same chart.

Chapter 4 Geographic Distribution of CUNY Teacher Education Students According to College and Place of Residence

It is interesting and perhaps useful to observe and analyze differences between the senior colleges of CUNY in the residential location of their students. Routine tabulations of the Teacher Education enrollees according to Health Area and borough of residence for each college, provided the data base for this analysis. The tabulations do not, of course, include students who resided outside New York City or who failed to report a meaningful home address within New York City in the 1968 Spring Census of Teacher Education.

Table 6 shows the number of students reported by each of the eight colleges according to their borough of residence. The data for the five largest colleges, show considerable variation in the per cent of students residing in the "home borough" of each college as indicated below:

Name of College	Per cent of students from "home borough"	"Home borough" of each college
Brooklyn College	90.4	Brooklyn
Queens College	89.2	Queens
Lehman College	76.4	Bronx
City College	35.4	Manhattan
Hunter College	29.3	Manhattan

It is apparent that the two oldest colleges (City and Hunter) have the lowest percentage of students in their "home borough" while two of the newer colleges (Brooklyn and Queens) have the highest percentages.

Table 6 Distribution of Teacher Education Enrollees in CUNY Senior Colleges in the Spring of 1968 According to College Attended and Borough of Residence

College Attended	Total Students	Borough of Residence				
		Brooklyn	Queens	Bronx	Manhattan	Richmond
Total	37,236	14,617	10,324	6,390	4,993	912
Brooklyn	11,600	10,486	754	34	257	69
Hunter	7,498	1,980	1,722	1,437	2,198	161
Queens	6,929	464	6,183	151	126	5
City	6,006	870	1,087	2,130	1,878	41
Lehman	3,176	213	195	2,430	337	1
Baruch*	1,028	384	286	191	159	8
Richmond	828	155	14	13	29	627
York	161	65	83	4	9	0

A more detailed picture of the distribution of the Teacher Education students in these five colleges is provided by the accompanying five dot maps. There is a separate map for each college and a dot for each enrollee. The spotting of the dots has been done using the Health Areas as the basic units. It is evident that there are wide differences within boroughs as well as between boroughs in the concentration of dots.

Because of differences in the geographic area of each Health Area as well as because of differences in the proportion of the population in the age group 18 to 27, a more complex mode of analysis is required.

As previously indicated, a Teacher Education enrollment ratio was computed for each of the 338 Health Areas. The estimated population 18 to 27 was used as the base in computing these ratios. The ratios were then grouped into ten classes as shown in the illustrative Maps 2 and 3**. Areas with a high proportion of Teacher Education students are coded "9" while those areas with an extremely low proportion of Teacher Education students are coded "0".

By using Maps 2 and 3 in conjunction with the Index Map*** it is possible to locate the precise Health Areas which are of interest in relation to the codes. For example, someone may find that a group of adjacent Health Areas have high codes in Teacher Education enrollment and it is desired to obtain more information about these areas. Through the use of the Index Map to obtain the identity of the Health Areas (including Borough), the particular Health Areas of interest may be located in the file.

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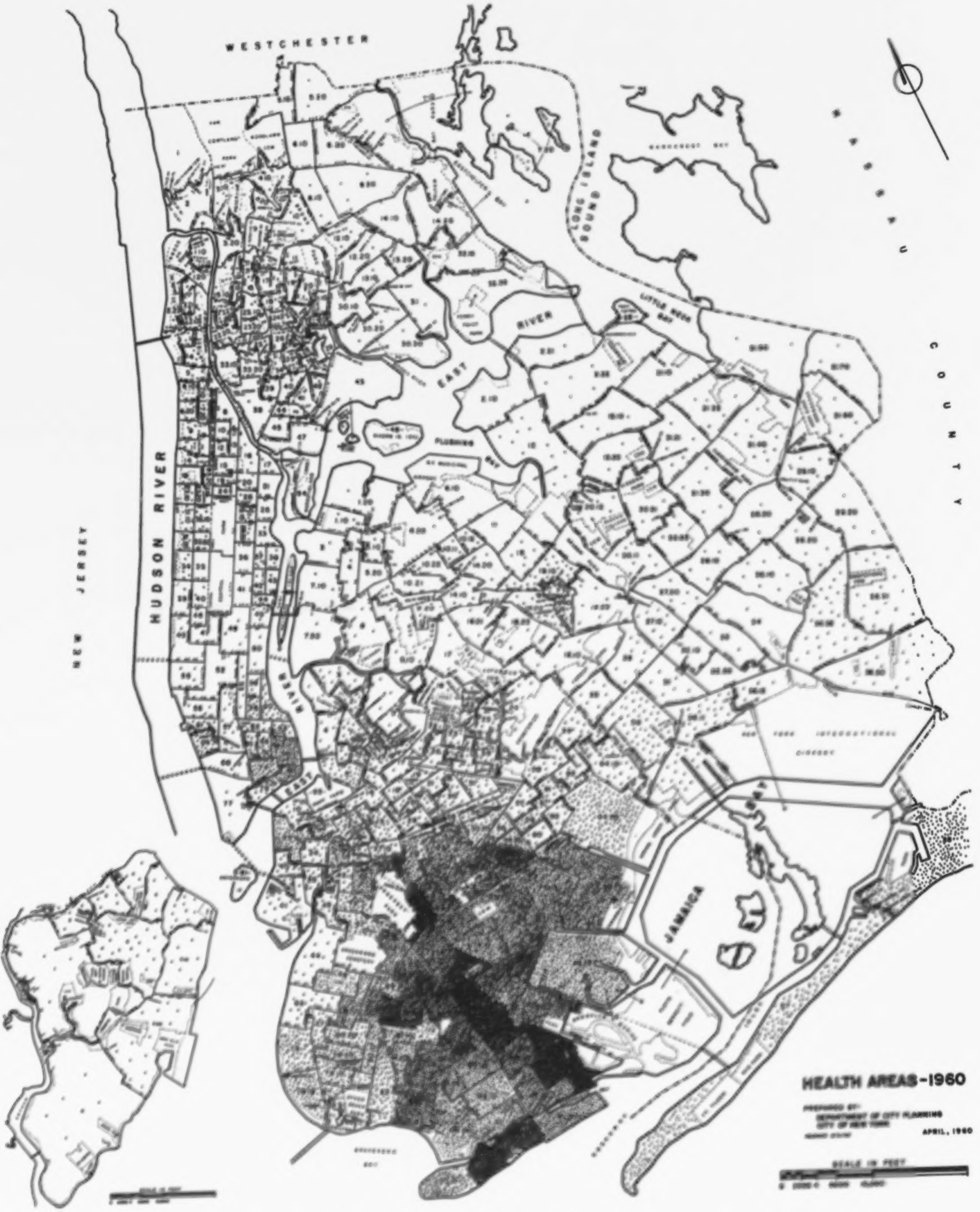
*It is possible that many of these students were registered in City College even though the classes they were attending were at Baruch College.

**Page 14 & 15.

***See pocket inside back cover.

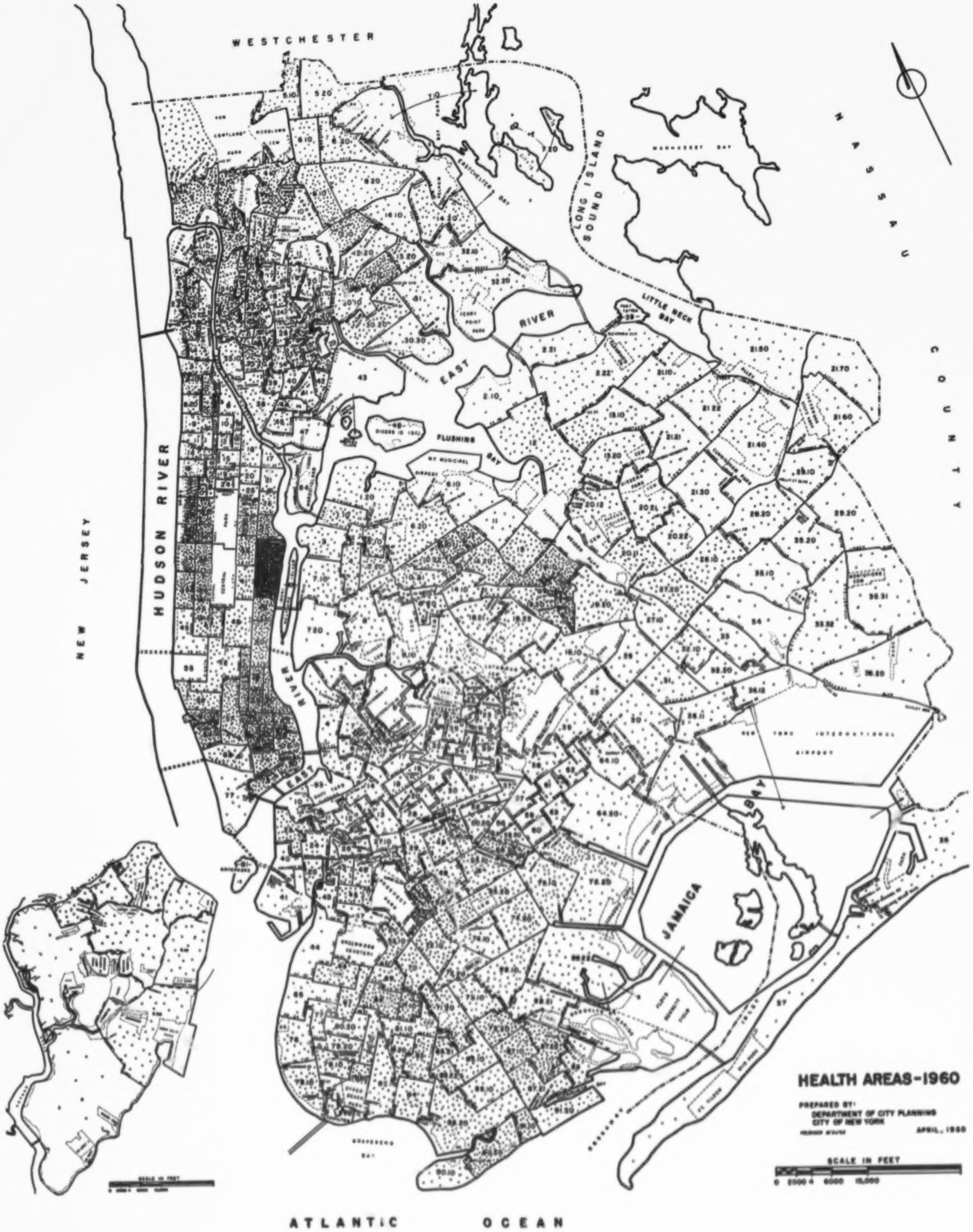
Map 4

Residential Location of 11,600 Students in Teacher Education
Enrolled in Brooklyn College: Spring 1968


WESTCHESTER
NASSAU COUNTY
LONG ISLAND SOUND
LITTLE NECK BAY
EAST RIVER
FLUSHING BAY
HUDSON RIVER
NEW JERSEY
NEW YORK INTERNATIONAL AIRPORT
JAMAICA BAY
ATLANTIC OCEAN
HEALTH AREAS-1960
PREPARED BY:
DEPARTMENT OF CITY PLANNING
CITY OF NEW YORK
APRIL, 1960
SCALE IN FEET

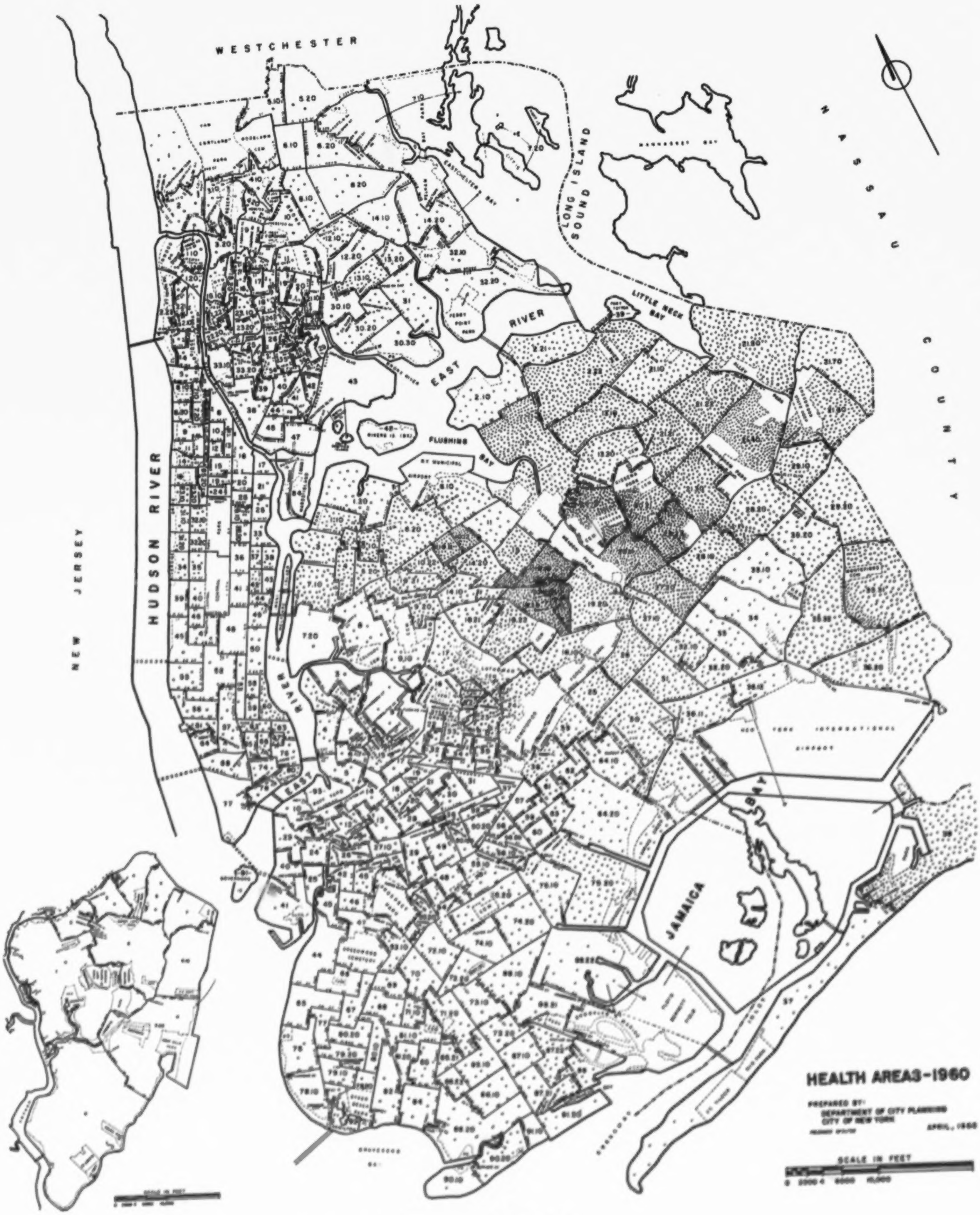
Map 5

Residential Location of 7,498 Students in Teacher Education
Enrolled in Hunter College: Spring 1968


WESTCHESTER
NASSAU COUNTY
LONG ISLAND SOUND
LITTLE NECK BAY
EAST RIVER
FLUSHING BAY
HUDSON RIVER
NEW JERSEY
EAST RIVER
NEW YORK INTERNATIONAL AIRPORT
JAMAICA BAY
ATLANTIC OCEAN
HEALTH AREAS-1960
PREPARED BY:
DEPARTMENT OF CITY PLANNING
CITY OF NEW YORK
APRIL, 1960
SCALE IN FEET
0 2000 4 6000 10,000
SCALE IN FEET

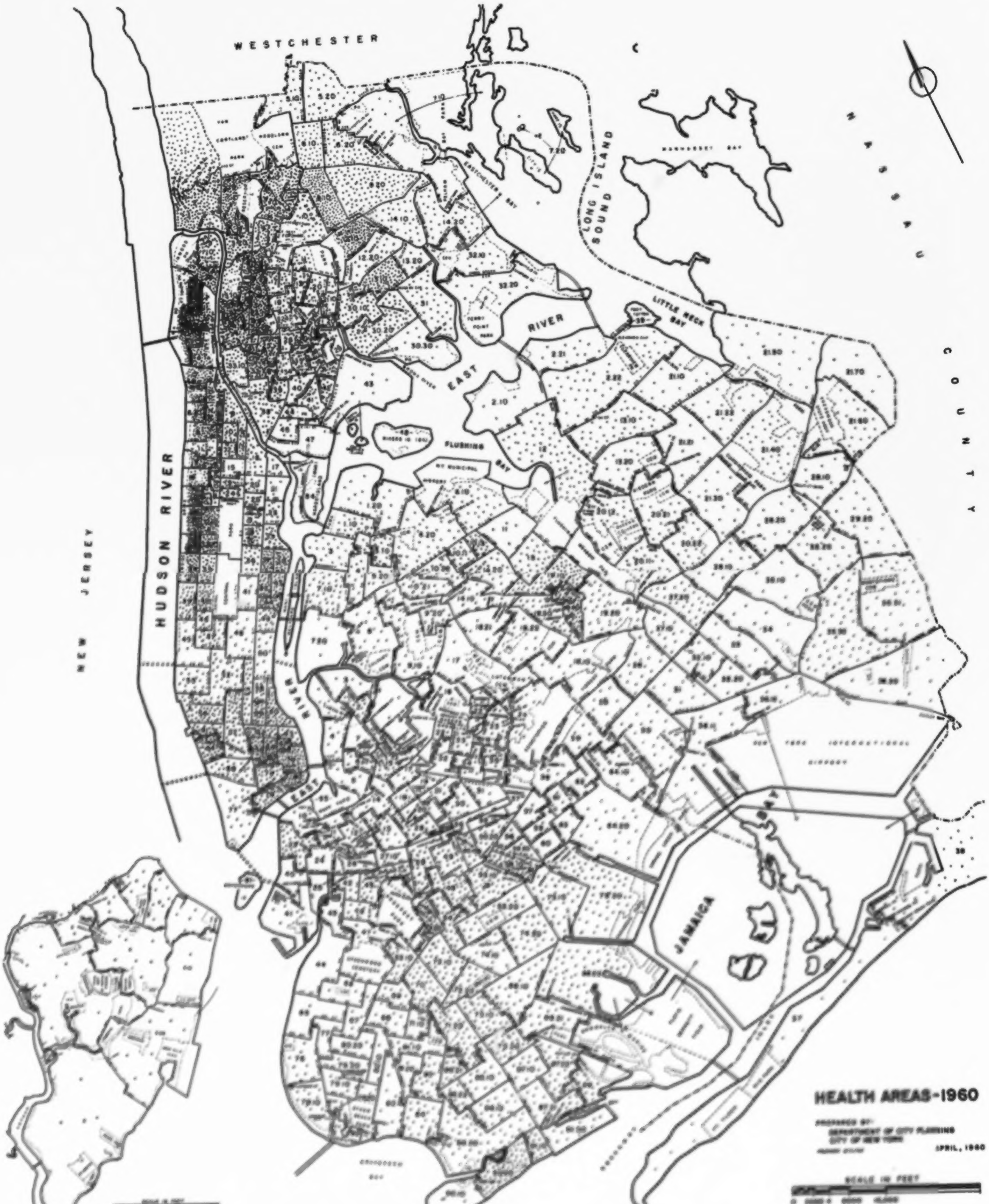
Map 6

Residential Location of 6,929 Students in Teacher Education Enrolled in Queens College: Spring 1968


WESTCHESTER
NASSAU COUNTY
LONG ISLAND SOUND
LITTLE NECK BAY
EAST RIVER
FLUSHING BAY
HUDSON RIVER
NEW JERSEY
JAMAICA BAY
ATLANTIC OCEAN
HEALTH AREAS-1960
PREPARED BY:
DEPARTMENT OF CITY PLANNING
CITY OF NEW YORK
APRIL, 1960
SCALE IN FEET
0 2000 4000 6000 10,000

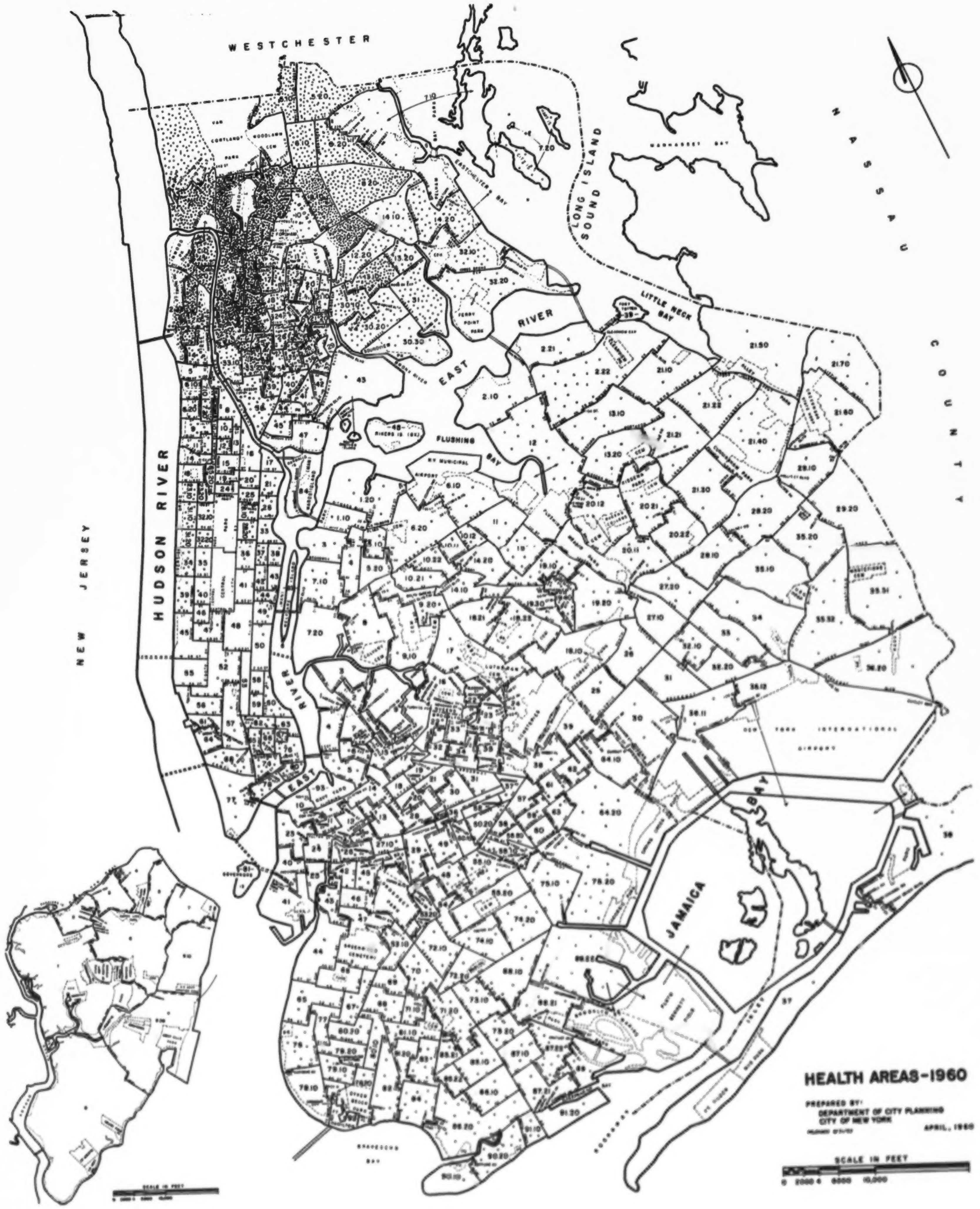
Map 7

Residential Location of 6,006 Students in Teacher Education Enrolled in City College: Spring 1968


WESTCHESTER
NEW JERSEY
HUDSON RIVER
EAST RIVER
LONG ISLAND SOUND
LITTLE NECK BAY
FLUSHING BAY
NASSAU COUNTY
JAMAICA
ATLANTIC OCEAN
HEALTH AREAS-1960
PREPARED BY:
DEPARTMENT OF CITY PLANNING
CITY OF NEW YORK
APRIL, 1960
SCALE IN FEET

Map 8

Residential Location of 3,176 Students in Teacher Education Enrolled in Lehman College: Spring 1968


WESTCHESTER
NASSAU
COUNTY
NEW JERSEY
HUDSON RIVER
EAST RIVER
LONG ISLAND SOUND
LITTLE NECK BAY
FLUSHING BAY
RIKERS IS
JAMAICA BAY
NEW YORK INTERNATIONAL AIRPORT
GRAVESEND BAY
ATLANTIC OCEAN
HEALTH AREAS-1960
PREPARED BY:
DEPARTMENT OF CITY PLANNING
CITY OF NEW YORK
APRIL, 1960
SCALE IN FEET
0 2000 4000 6000 10,000

Chapter 5 Rationale for the Current Use of 1960 Data About Health Areas

A question commonly asked is "How much reality is there in using 1960 information eight years later?" In a rapidly changing society many conditions and characteristics of small areas can change during an eight year period. Unfortunately, Congress has not authorized a complete Census oftener than every decade. There is no other source for obtaining detailed information concerning the full set of characteristics of neighborhoods.

Why then was the decision made to undertake a study of this type at this time? There are several answers. First, studies of trends from decade to decade in the past, conducted in many cities indicate that there is comparatively little change in the relative standing of neighborhoods with respect to many variables. However, there have been radical changes resulting from redevelopment, construction of large housing projects, and movement of ethnic groups in New York City.

Investigation revealed that there are specific types of current data available from New York City agencies which may be helpful in resolving some of the unknowns. These are: (1) births coded for ethnicity and health area for 1960 and 1966; (2) changes in the total number of housing units in each health area for the period from 1960 to 1967; (3) changes in juvenile delinquency rates in each health area from 1960 to 1966. Analysis of the data indicated that they could provide the basis for the following types of estimates: (1) changes in the percentage of the population nonwhite and changes in the percentage of the population Puerto Rican in each Health Area; (2) per cent of change in the total number of housing units in each health area; (3) per cent of change in the juvenile delinquency rates from 1960 to 1966 to provide an indication at least of sizeable changes in the nature of the population in each Health Area.

It was found that there was a rise of 5 per cent or more in the percentage of the population nonwhite and Puerto Rican in 109 Health Areas. There was a drop of 5 per cent or more in this percentage in only 27 Health Areas. The over-all estimate of the change in the per cent nonwhite and the per cent Puerto Rican was as indicated below:

	1960 Census	1966 Estimate
Per cent of population nonwhite	14.7	18.6
Per cent of population Puerto Rican	7.9	8.5

The following method was used in arriving at these estimates. The data from the 1960 Census as well as the birth data were tabulated so that Puerto Ricans classified as nonwhite were subtracted from the total nonwhite population and were then added to the Puerto Rican white population to obtain a count of the total Puerto Rican population. Since the nonwhite Puerto Ricans had been subtracted from the total nonwhites, the remainder of the nonwhite population was classified as nonwhite.

Changes in the percentage of the total population in each ethnic group were computed by the following operations:

1. The percentage increase was computed in the number of nonwhite births (edited as indicated above) from 1960 to 1966.
2. This percentage of increase was applied to the 1960 Census percentage of nonwhites (edited as indicated above) to obtain the estimated nonwhite population in 1966.

Similar calculations were performed for each Health Area to determine the estimated increase in the percentage of Puerto Ricans in the population.

It should be kept in mind that this method may be slightly in error in some Health Areas with a high proportion of people not involved in giving birth to children (e.g., elderly people, single people, students, etc.)

Map 9 indicates the areas which have changed more than 5 per cent in the percentage of the population nonwhite or Puerto Rican, and the amount of change.*

Map 10 is presented to show the percentage of nonwhites added to the percentage of Puerto Ricans. Ten categories are shown by means of one digit codes. A code of 9 indicates 90 per cent or more; 8 indicates 80 - 89 per cent, etc.

Turning to the analysis of changes in the housing supply in each Health Area, it was found that about one-sixth (53) of the Health Areas were estimated to have increased their housing supply 20 per cent or more. Three of the areas had increases of 100 per cent or more. The 53 areas were distributed as follows according to percentage of increase in housing:

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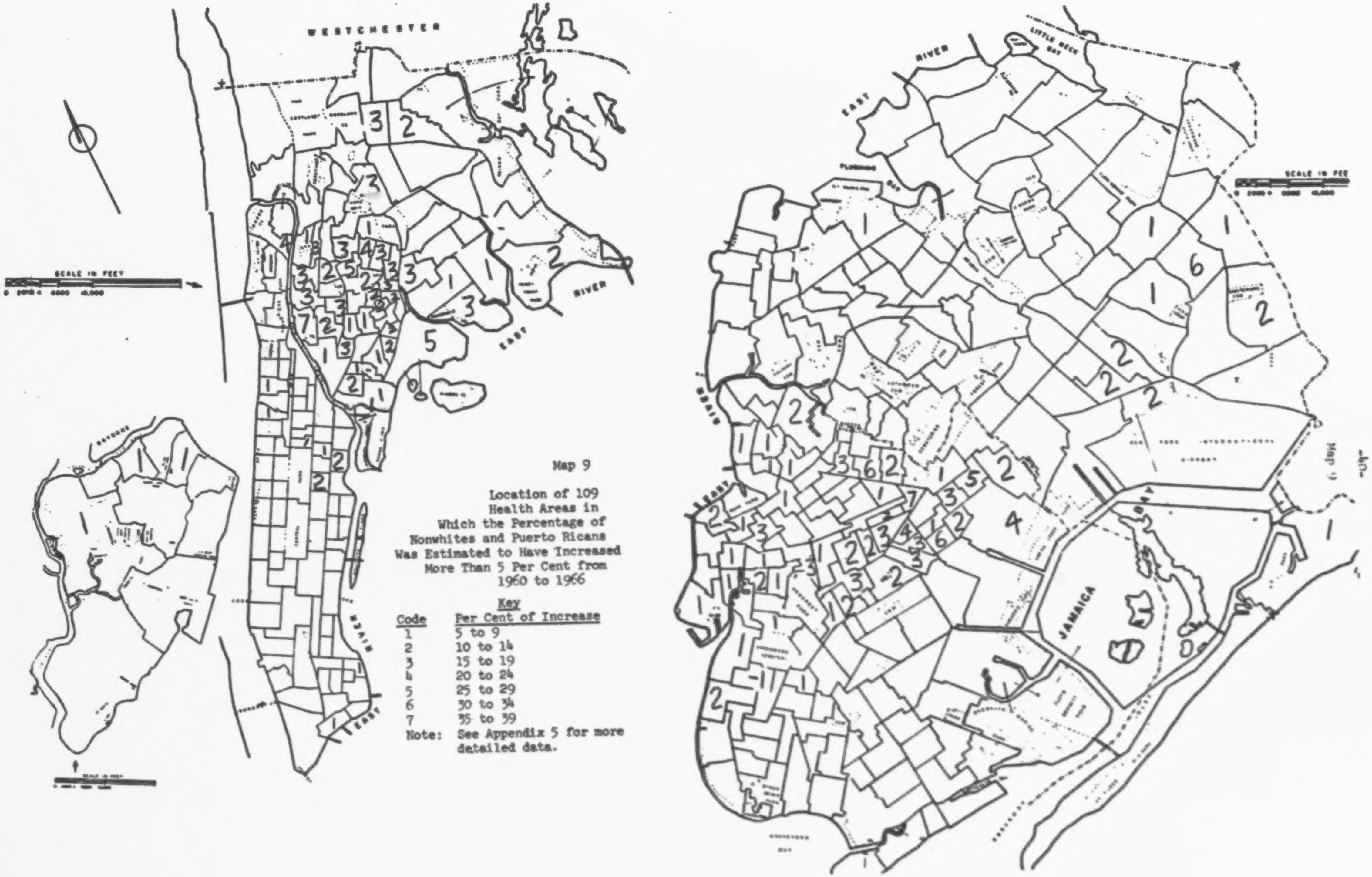
*See table in Appendix 5

MAP 9


WESTCHESTER
SCALE IN FEET
EAST RIVER
EAST RIVER
HARLEM RIVER
EAST RIVER
LITTLE NECK BAY
FLUSHING BAY
JAMAICA BAY
SCALE IN FEET

Map 9

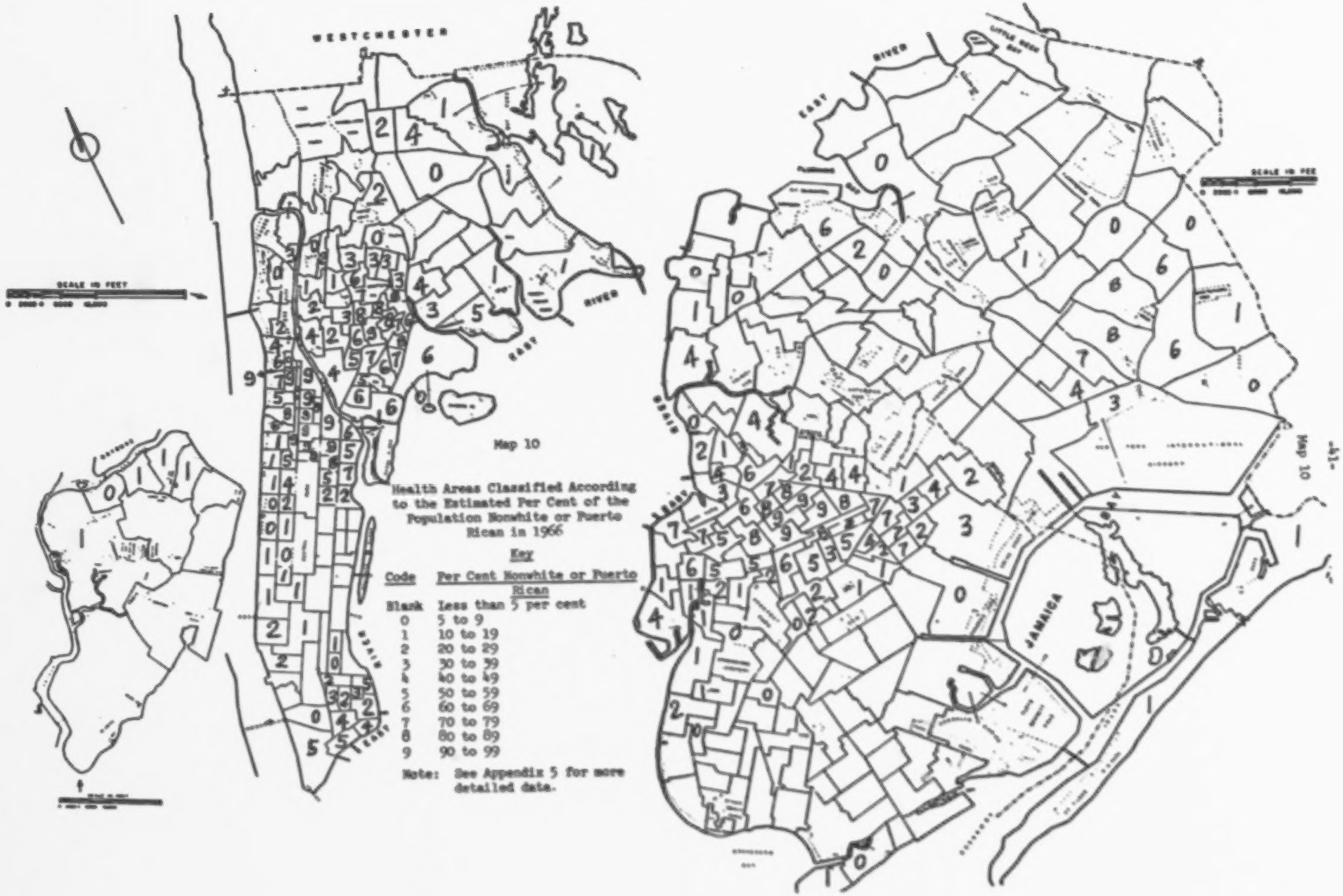
Location of 109
Health Areas in
Which the Percentage of
Nonwhites and Puerto Ricans
Was Estimated to Have Increased
More Than 5 Per Cent from
1960 to 1966

Key

Code	Per Cent of Increase
1	5 to 9
2	10 to 14
3	15 to 19
4	20 to 24
5	25 to 29
6	30 to 34
7	35 to 39

Note: See Appendix 5 for more detailed data.

MAP 10


WESTCHESTER
EAST RIVER
HARLEM RIVER
JAMAICA
LITTLE NECK BAY
SCALE IN FEET

Map 10

Health Areas Classified According to the Estimated Per Cent of the Population Nonwhite or Puerto Rican in 1966

Key

Code	Per Cent Nonwhite or Puerto Rican
Blank	Less than 5 per cent
0	5 to 9
1	10 to 19
2	20 to 29
3	30 to 39
4	40 to 49
5	50 to 59
6	60 to 69
7	70 to 79
8	80 to 89
9	90 to 99

Note: See Appendix 5 for more detailed data.

Per cent of increase in housing supply 1960 to 1967	Number of Health Areas
70 or more	4
60 - 69	3
50 - 59	1
40 - 49	6
30 - 39	11
20 - 29	28
Total	53

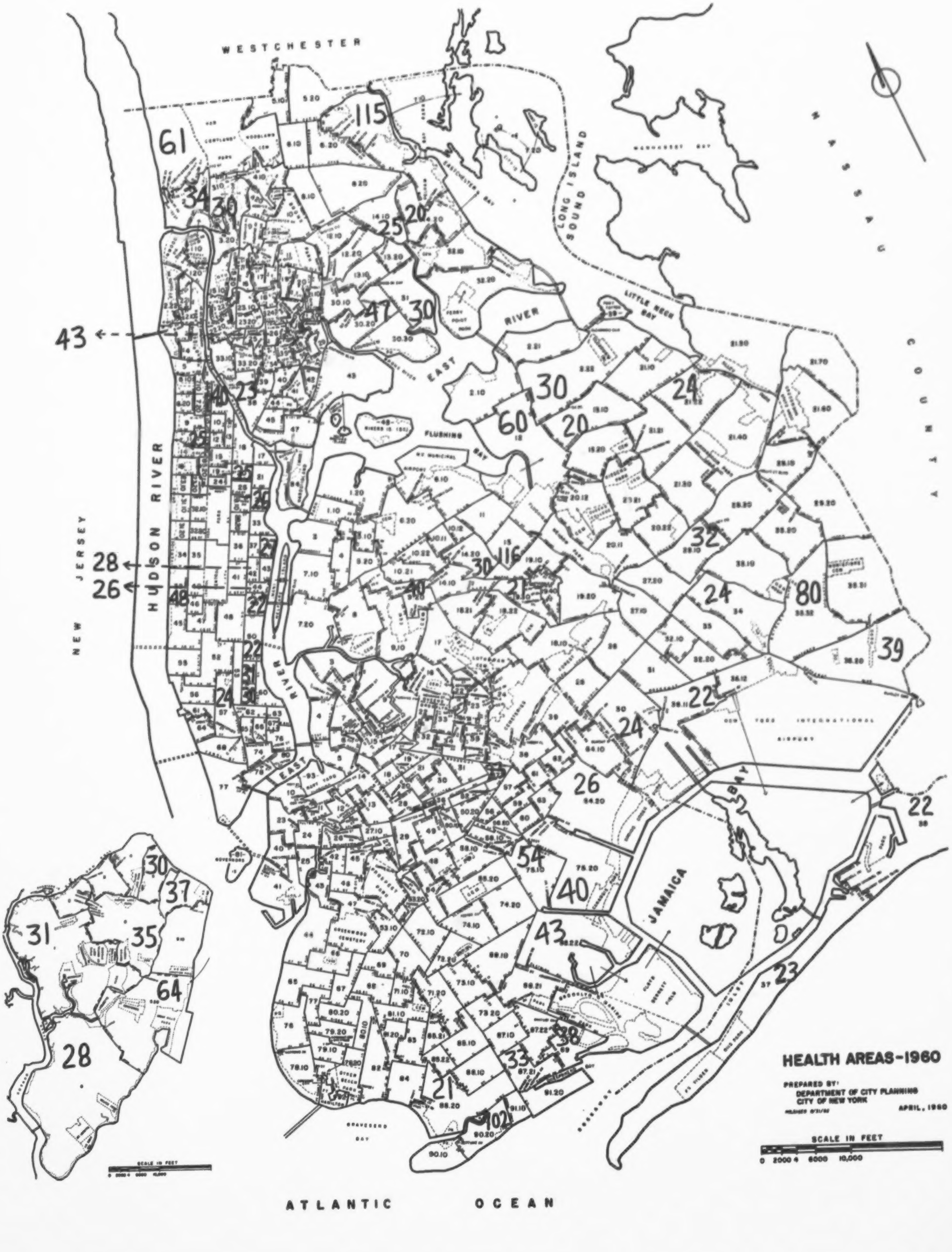
The location of these areas is shown in Map 11. About one-sixth of the Health Areas in Manhattan and Bronx boroughs were represented among the above 53 high growth areas. About one-fifth of the Queens areas were in this group but only eight per cent of the Brooklyn areas. In staten Island six out of the ten areas were in this high growth group.

Further analysis revealed that in 162 Health Areas the percentage change in the number of housing units varied from minus two per cent up to plus six per cent. The relatively little change in the housing supply in about one half of the Health Areas indicates that rapid change in housing supply was the exception rather than the rule in the period 1960 to 1967.

Attention should be called to 24 Health Areas which were not among the areas with an increase of 20 per cent in total housing units. In these 24 areas public or city and state aided cooperative housing projects with at least 1,000 housing units were opened for occupancy during the period 1960 to 1967. It is important to be aware of areas in which housing projects were opened after the 1960 Census as well as the type of population residing in these projects because of the possible bias resulting from the influx of a new population. Following is a list of 24 Health Areas containing one or more public or cooperative housing projects with state and city subsidy, opened since 1960:

Map 11

Health Areas in Which the Housing Supply was Estimated to Have Increased 20 Per Cent or More from 1960 to 1967
(Large numbers indicate per cent of increase)


WESTCHESTER
NASSAU COUNTY
LONG ISLAND SOUND
NEW JERSEY
HUDSON RIVER
EAST RIVER
FLUSHING BAY
LITTLE NECK BAY
JAMAICA BAY
NEW YORK INTERNATIONAL AIRPORT
GRAVESEND BAY
ATLANTIC OCEAN
61
34
30
115
25
20
47
30
43
40
23
25
26
27
28
26
48
22
22
31
24
30
60
30
20
24
30
116
40
21
32
24
80
39
22
24
26
54
40
43
38
33
21
102
22
23
30
37
31
35
64
28
HEALTH AREAS-1960
PREPARED BY:
DEPARTMENT OF CITY PLANNING
CITY OF NEW YORK
APRIL, 1960
SCALE IN FEET
0 2000 4 6000 10,000

Borough and Health Area	Estimated population provided housing	Total population in 1960
Bronx Borough		
35	3640	21,582
39	3480	18,084
41	5300	21,435
45	9150	31,352
Brooklyn Borough		
5	2440	26,601
6	2050	25,908
13	3970	25,776
15	5660	31,804
17	4720	20,394
26	1970	22,805
59	4240	24,493
Manhattan Borough		
25	5290	19,159
31.1	1130	35,970
32.1	1230	31,756
33	1690	17,812
52	1390	26,299
56	3180	27,906
66	3880	20,518
76	5530	34,192
78	2870	26,449
80	1440	13,529
Queens Borough		
None		
Richmond Borough		
3	2140	21,112
4	1840	27,044

In using these data it should be kept in mind that many of the occupants moving into these projects may have previously resided in the vicinity of the project if not in the same Health Area. If this assumption is correct the changes produced in population characteristics may have been minimal.

For New York City as a whole, the juvenile delinquency rate increased from 42.3 per 1,000 youth 7 to 20 years of age in 1960 up to 53.9 in 1966. This amounted to an increase of 27 per cent. In 44 Health Areas the delinquency rate more than doubled during this period. However, the rate declined in 112 Health Areas. Areas with a reported rise in juvenile delinquency from 1960 to 1966 may have actually experienced such a rise. On the other hand, it is possible that the rise was due to the police officers in the particular are working harder to locate and report cases of delinquency. Furthermore, the rise in the rate may have been the result of an unrecognized drop in the estimated population 7 to 20 years of age. Conversely, if there was a drop in the rate it may have been due to an unrecognized rise in the population 7 to 20. Despite these problems, it should be useful in indicating a need for investigating whether it is a correct or false warning signal.

Chapter 6 Some Potential Uses of the Data, Materials and Methods Developed in This Study

Since this is probably the first time that a project like this has been undertaken in a major city, possible uses can be only tentatively suggested. If further resources are allocated for this type of research, the currency, utility and availability of the materials should be enhanced. It is hoped that some of the ideas presented may lead towards improved applications.

1. Facilitate the specification of the environmental characteristics of neighborhoods in which program experiments are undertaken in relation to Teacher Education.

The 15 types of areas offer a wide range of neighborhoods in which to conduct program experiments. For example, there are 25 Health Areas in the Type 4D classification. It will be recalled that these are the areas which are lowest in the Family Status and Socio-Economic indexes. If it is desired to delimit the 4D Health Areas more sharply, a quick machine sort of a handful of cards will classify the 25 areas further according to a current estimate of the percentage of the population nonwhite or Puerto Rican.

The 17 x 22 Health Area Index Map may be used to locate the selected areas geographically. This map may then be compared with the atlas of some 60 maps showing the neighborhood patterning of each variable. Health Area profiles may then be selected and studied to obtain intelligence on any unusual or biasing condition. For example, it is possible that an entire area consists of public housing projects or housing cooperatives built since 1960. It is also possible that a pronounced change in the character of an area has taken place due to the influx of nonwhites and Puerto Ricans. This will be indicated by a sharp rise in the 1966 percentage of nonwhite and Puerto Rican births as compared with the 1960 percentage. Sizeable changes in the juvenile delinquency rate from 1960 to 1966 may be indicative of biasing trends.

Even though the original number of 25 areas is reduced to 15 by the pruning process, there should be a possibility of selecting several experimental and control areas. If the project needs to be based on one or more schools whose territory of service does not coincide with Health Areas, it may be possible to combine several contiguous Health Areas to approximate the school's service area. If desired, use may be made of data on file at the Department of City Planning for census tracts, enumeration districts and blocks.

One of the major uses of a body of statistical data such as has been assembled in this study, is in the objective specification of the environmental characteristics of the neighborhood area in which the experiment is located. Usually only very gross descriptions are presented, if any, concerning the characteristics of the setting. While the classification framework developed in this study may not meet all requirements it may at least suggest a general method for using Census and other data in specifying the characteristics.

Another use in connection with program experiments is in modifying programs according to the basic characteristics known about the area. For example, a high income predominantly nonwhite area would probably require a different type of program than a low income nonwhite area. Should a low income nonwhite area with low family status require a different type of program than a low income nonwhite area with high family status? The latter type of area might be located in a low density single family home area as contrasted with a high rise, small apartment type of area. A program proven to be effective in one type of area may not be successful in a different type of area. Knowledge which is tested and evaluated before application is likely to command more financial allocations than untested knowledge.

2. Provide data to measure the severity of environmental conditions in specific neighborhoods which tend to handicap individuals in obtaining Teacher Education.

The implementation of this idea would need to be based on some supplementary research to identify which of the available indicators are judged to be measures of handicapping conditions. Approximate weights might be established for each of the variables so that an index could be computed for each Health Area. This index might be used in conjunction with questionnaire data provided by applicants for participation in special college and Teacher Education programs to determine the type and amount of ameliorative effort which should be provided to specific applicants. It should be recognized that there is a street index for each borough which can be used by an average clerk to convert a home address into a Health Area number.

It is possible that the questionnaire data could be processed so as to supplement the somewhat limited scope and timeliness of the present store of data items. By establishing correlations between the Census data and questionnaire data on selected items (e.g., persons per family, sex of family head, number of rooms in the housing unit, total family income, number of income earners in the family, etc.) it should be possible to develop linkages with data items not currently available.

3. Provide information for planning the location of Teacher Education college and pre-college educational institutions.

As far as can be determined there is no comprehensive data bank generally utilized by planners of educational institutions for rational site selection. It is believed that this project provides a small beginning through the availability of counts and ratios of the Teacher Education students enrolled in the CUNY colleges. These data are available in machine retrievable language (small decks of punch cards) and are classified according to Health Area.

Through the use of available computers it is now possible to determine the number of Teacher Education students enrolled in each of the eight CUNY senior colleges according to borough, distance from the college campus, Health Area or special groupings of Health Areas. It is not inconceivable that this type of data coule ultimately be obtained for all Teacher Education students in colleges located in the New York metropolitan area. A relatively simple mark sense card might eventually be distributed by the cooperating colleges so as to obtain certain minimum data items on each student along with his name and address.

Ultimately, there might be a continuing record on each student housed in a confidential computerized file which would provide a basis for obtaining stratified random samplings of specific individuals with a systematic follow-up on samples of non-respondents. However, the present hysteria concerning "invasion of privacy" may make it politically impossible to perform at least as well as in certain countries abroad (such as Sweden).

4. Assist educators and their students in Teacher Education in becoming familiar with the basic characteristics of the neighborhoods in which they are practicing.

It is quite possible that many students engaged in practice teaching (as well as some of their professors) are not intimately familiar with the basic characteristics of problem neighborhoods. Ways may need to be developed using audio-visual devices and selected materials produced by this project to overcome such deficiencies.

It is also possible that such study will lead to the nomination of important new variables which would bring us more rapidly to knowledge concerning the factors limiting participation in secondary school, college and Teacher Education. Perhaps a small group of five students, each armed with a list of 10 random addresses located in a particular Health Area and a small battery operated tape recorder could provide productive materials for use in seminar discussions and the preparation of reports on the factors impeding educational participation.

5. Systematic effort to identify and evaluate the basic factors limiting participation in Teacher Education might be facilitated through using the available materials as a point of departure.

As already indicated, the available data provide a sufficiently accurate base to guide the selection of stratified area samples using Health Areas as the basic units. Sampling by block and housing unit within Health Areas could be conducted if it were desired to adopt the most rigorous sampling standards. Insights of many educators as well as published studies and surveys concerning likely causes of the low participation in education in certain types of areas should be assembled, classified and systematically tested. Clues should be sought concerning successful program experiments elsewhere or conclusions concerning the kinds of experiments which are judged to be feasible and effective in the particular type of neighborhood.

There are several kinds of extremes which should be guarded against in this type of study. Care should be taken lest the requirements of survey rigor make it impossible to identify or test those variables which are poorly defined, somewhat nebulous, and hard to collect because of communication difficulties. There is also the danger of becoming mired in a mass of confused and contradictory hunches, guesses, and idiosyncratic anecdotes. The ultimate test of any theory, piece of "practice wisdom" or bit of "shrewd insight" should lie in its utility for designing and evaluating program experiments related to enhancing participation in education.

6. Estimation of trends in factors related to planning Teacher Education programs can be facilitated by access to a continuing data bank maintained in a machine readable format.

Several data items were assembled in this study which are independent of the U.S. Census and which are useful in terms of planning, forecasting and estimating. Data on births according to race were obtained for 1960 and 1966 providing a basis for estimating the per cent of population in each Health Area which is Puerto Rican or nonwhite. Data on changes in the total number of housing units were estimated by the Department of City Planning and were used in this study to identify the 53 Health Areas in which there was an increase of more than 20 per cent. Data on juvenile delinquency rates for Health Areas were obtained from the Youth Board to give an indication of trends in delinquency from 1960 to 1966. More continuing, systematic effort is needed to extend the collection to include items such as public welfare cases, residents of public housing projects, school drop-outs, and high school graduates.

There should be annual estimates of the total population in each Health Area as well as estimates according to broad age groups. Even though the Department of City Planning estimates changes in the number of housing units according to Health Area, they do not estimate total population.

Appendix 1

LIST OF 55 VARIABLES USED IN THE ANALYSIS OF 338 HEALTH AREAS ALONG WITH THE MEAN, STANDARD DEVIATION, COEFFICIENT OF SKEWNESS, COEFFICIENT OF VARIATION, VARIABLE NUMBERS, AND PROFILE LINE CODE.

Var. no.	Description of variables	Mean	Standard Deviation	Coeff. of Skewness*	Coeff. of Variation	Profile line no**	### Source
01	% of pop. 25 or over with 12 yrs. or more of schooling	35.3	13.9	.388	39.3	13	P-20
02	% of pop. 25 or over with 8 yrs. or more of schooling#	75.9	11.5	-.707	15.1	14	P-20
03	Median yrs. of schooling completed by pop. 25 or over	10.04	1.42	.718	14.1	12	P-20
04	Enrollees in college as % of pop. 15 to 24	16.6	11.6	.568	69.8	15	P-3A P-19
05	% of kindergarten to 12th grade enrollees in private school	29.9	16.2	.203	54.1	53	P-19
06	Elementary & secondary school teachers per 1,000 workers in the labor force	13.6	9.8	.795	72.0	16	P-47
07	Teacher Education students enrolled in CUNY Sr. Coll. per 1,000 est. pop. 18 to 27	34.9	31.4	.850	89.9	42	T.E.
08	Non-Teacher Education students per 1,000 est. pop. 18 to 27	48.5	39.9	.714	82.2	43	T.E.
09	Teacher Ed. students as % of all students in Sr. Colleges of City University	40.2	8.72	.172	21.6	44	T.E.
15	Full-time Teacher Ed. students as % of Teacher Ed. students	39.9	14.9	.161	37.3	45	T.E.
19	Graduate Teacher Ed. students as % of Teacher Ed. students	31.7	13.3	.203	41.9	46	T.E.
20	Matriculated Teacher Ed. students as % of Teacher Ed. students	69.0	15.2	.769	22.0	47	T.E.
21	Foreign stock from Northwest Eur. & Canada (Norway, Swed., UK, Ireland) as % tot. pop.	7.81	6.02	.498	77.0	37	P-16
22	For. stock from Central Eur. (Austria, Czech Germany & Hungary) as % of total pop.	8.82	6.19	.436	70.1	38	P-16
23	For. stock from Eastern Eur. (Poland & USSR) as % of total population	11.69	10.84	1.053	92.3	39	P-16
24	For. stock from Southern Eur. (Italy) as % of total population	11.11	10.96	.824	99.0	41	P-16
25	Total foreign stock (for. born, or native with for. or mixed parent.) as % tot. pop.	48.0	16.6	.777	34.5	36	P-16
26	Nonwhite pop. as % of 1960 pop. (except Puerto Rican nonwhites)	14.69	24.39	1.414	160.0	29	P-1

*Pearsonian Coefficient of Skewness ($SK = \frac{3(X - Med.)}{S.D.}$).

**Represent card number and field in card as well as position in the profile.

#Variable complemented after the computation of the basic ratios.

##Variables not used in the profiles.

###Source: See Appendix 2 for identification of source data.

Appendix 1

Var. no.	Description of variables	Mean	Standard Deviation	Coeff. of Skewness	Coeff. of Variation	Profile line no**	### Source
27	Puerto Rican pop. as % of 1960 pop. (including white Puerto Ricans)	8.33	13.14	1.534	157.8	33	P-16
28	Nonwhite births (except P. R. nonwhite births as % of 1960 births	18.14	25.74	1.464	141.8	31	P-16
29	Nonwhite births (except P. R. nonwhite births) as % of 1966 births	24.02	27.95	1.457	116.6	32	H.D.
30	Puerto Rican births (including white P. R. births) as % of 1960 births	13.75	19.34	1.749	140.3	33	H.D.
31	Puerto Rican births (including white P. R. births) as % of 1966 births	14.68	18.52	1.670	126.1	34	H.D.
32	Persons in primary families per primary family	3.35	.357	-.336	10.4	62	P-2A
33	Persons in households per households	2.96	.483	-.310	16.31	##	H-13
34	Per cent of total population living in primary families	87.7	10.33	-1.048	11.74	##	P-2A
35	Per cent of primary families with wife present	81.9	7.23	-.667	8.79	##	P-2A
36	Fertility Ratio: Chldn. under 5 per 1,000 women 15 to 49 years of age	357.9	104.6	.312	29.2	63	P-9
37	Children under 18 not child of prim. fam. head as % of all children under 18	7.62	5.91	1.076	77.6	56	P-2A
38	Nonrelatives of household head as a % of household population	2.53	2.29	1.349	90.5	##	P-2A
39	Related individuals as a % of the pop.#	89.1	9.69	1.114	10.8	25	P-16
40	% of households with 3 or more persons# per household	81.7	12.05	-.747	14.6	24	P-2A
41	% of pop. 10 to 14 years of age	7.39	2.05	0	28.1	##	P-3A
42	% of pop. 15 to 19 years of age	6.29	1.25	-.384	19.9	##	P-3A
43	% of household heads moving to this H. U. between 1954 and 1960#	50.0	9.09	.495	18.2	64	H-24
44	% of H. U. not in a deteriorating or dilapidated condition#	83.3	16.49	1.329	19.8	22	H-2
45	% of housing units with shared or no bathing facilities	6.55	9.29	1.419	143.0	57	H-31
46	% of households with 1.01 or more persons per room	12.79	6.54	.822	50.7	58	H-12
47	Aver. number of persons per room in households	.718	.088	.341	12.5	59	H-13
48	Average no. of rooms per occupied H. U.	4.13	.711	.296	17.1	28	H-13

##Variables not used in the profiles.

Appendix 1

Var. no.	Description of variables	Mean	Standard Deviness	Coeff. of Skewness	Coeff. of Variation	Profile line no**	### Source
49	% of H. U. in structures with 10 or more housing units	50.4	33.1	.145	65.6	54	H-18
50	H. U. in structures with 4 or more floors without elevator service as % of H. U.	29.2	26.6	.913	91.0	55	H-18
51	Professional, managerial, clerical and sales workers as % of employed workers	45.0	15.8	.227	35.1	17	P-46
52	Households with a male head as % of households#	77.3	8.65	-.344	11.2	26	P-14A
53	Females not in the labor force as % of females 14 or over#	60.3	8.25	-.510	13.5	27	P-40
54	Unemployed females as % of the female labor force	5.65	2.39	.816	42.3	##	P-40
55	Ratio of nonworkers of all ages to the labor force	1.27	.36	.083	28.3	61	P-46
56	Per cent of families with 1959 incomes over $3,000#	83.6	9.01	1.099	10.7	21	P-29
57	Per cent of families with 1959 incomes over $10,000	17.49	11.68	.559	66.8	19	P-26
58	Median family income for the year 1959	6174	1930	.006	31.2	18	P-26
59	Per cent of households with at least one automobile	42.6	22.2	.391	52.1	52	P-38
60	1960 jevenile delinquency rate per 1,000 youth 7 to 20 years of age	43.3	31.5	.933	72.9	48	Y.B.
61	1966 juvenile delinquency rate per 1,000 youth 7 to 20 years of age	54.1	39.0	1.162	72.1	49	Y.B.
62	1966 delinquency rate as a per cent of 1960 rate	137.0	78.5	.726	57.2	51	Y.B.
63	Estimated per cent of change in the number of housing units	10.97	10.35	2.107	94.3	65	C.P.

Variables not used in the profiles.

Appendix 2

LIST OF TABULATIONS USED IN PRODUCING VARIABLES FOR THIS STUDY

Note: See Appendix 1 for codes relating variables to source data listed in Appendix 2

1. Population and housing data for Health Areas compiled by the New York Dept. of City Planning from tabulations obtained from magnetic tapes supplied by the U. S. Census Bureau from the 1960 Census.

Table	Title	Variables derived from each table
P-2A	Living arrangements for total population	32, 34, 35, 37, 38, 40
P-3A	Total population by five-year age groups	04, 41, 42
P-9	Fertility Ratio: children under 5 per 1,000 females 15 to 49 by race	36
P-14A	Occupied housing units by tenure, sex and and age of head	52
P-16	Persons by race, ethnic group, nativity and country of origin; unrelated individuals	21 - 27, 39
P-19	Persons 5 to 34 years enrolled in public and private school by level	04,05
P-20	Years of school completed, persons 25 years and over	01, 02, 03
P-26	Income in 1959 of families in 1960 by ethnic group	57, 58
P-38	Place of work, means of transportation, and automobiles available	59
P-40	Labor force status of female population by ethnic group	53, 54
P-46	Occupations of experienced civilian and unemployed labor force; population not in the labor force	51, 55
P-47	Specific occupations of the experienced civilian labor force	06
H-2	Condition and plumbing facilities: all housing units	44
H-12	Persons in housing units and persons per room, by race	46
H-13	Occupied housing units: total persons and total rooms by tenure with ratios	33, 47, 48
H-18	Number of units in structure, stories and elevators	49, 50
H-24	Year head of household moved into unit, by tenure and ethnic group of head	43
H-31	Heating equipment, type of basement, number of bathrooms, heating fuel	45

Appendix 2

II. Summary tables for population and housing characteristics of the five boroughs and the totals for New York City, prepared by the Dept. of City Planning from the Census Bureau's magnetic tapes. (Arranged similarly to the detailed tables some of which are listed above.)

III. Other data supplied by the New York City Department of Planning:

1. Total population by ethnic group by borough (actual data for 1960 and estimated data for 1965; in many instances 1965 data were provided only for combinations of two or more health areas). Report entitled: "1965 Population for 300 Planning Areas", May 1967.

2. Tabulations of estimated changes in the housing supply for health areas: 1960, 1965, and 1967. (Used in variable 63.) (C.P.)

3. Outline maps of Health Areas.

IV. New York City Youth Board, Research Dept. (variables 60 - 62). (Y.B.)

1. Ten-year delinquency trends in New York City: 1953 to 1962.

2. Selected socio-economic characteristics of New York City by Borough and Health Area, juvenile delinquency data 1960 to 1966; veneral disease rates for 1966; infant mortality rates for 1965.

V. New York City Health Department: machine tabulations of resident live births for 1960 and 1966 according to Health Areas (variables 28 - 31). (H.D.)

VI. New York City Housing Authority: Project Statistics, December 31, 1967.

VII. City University of New York, Division of Teacher Education, 1968 Spring Census of Teacher Education. Special tabulations made for 338 Health Areas (variables 07, 08, 09, 15, 19, 20). (T.E.)

Appendix 3

LISTING OF AREA PROFILES, MAPS, MACHINE TABULATIONS AND PUNCH CARDS

I. Area profiles:*

- A. Health Areas (338).
- B. New York City and Borough totals (6).
- C. Types of areas based on socio-economic and family status indexes (15).
- D. Four levels of Health Areas based on socio-economic index (4).
- E. Four levels of Health Areas based on family status index (4).
- F. Ten levels of Health Areas based on socio-economic index (10).
- G. Ten levels of Health Areas based on family status index (10).
- H. Four levels of Health Areas based on socio-economic index crossed against four levels of Health Areas based on per cent of population nonwhite or Puerto Rican (15).

II. Maps:

- A. Outline maps with machine postings of one-digit codes
    1. A separate map for Bronx-Manhattan-Richmond and one for Queens-Brooklyn for each of the 54 variables listed in Appendix 1. (Variables 10 to 14 and 16 to 18 were not mapped.)
    2. A number of special maps were produced

- B. Outline maps with machine postings of three-digit codes to indicate code number or each Health Area. (Corresponding five-digit Health Area codes are listed in Appendix 4.)

- C. Supplementary maps (see Table of Contents of the report).

III. Machine tabulations and lists:

- A. Input data:
    1. Ratios key punched from City Planning Department tables.
    2. Ratios derived from Teacher Education Census
        - a. Arranged by Health Areas within variables
        - b. Arranged by variable within Health Areas.
    3. Inverted matrix of ratios, percentages and averages for variables 1 to 63. (Format of Deck B (14) in flow chart.) Arranged by variables within Health Areas
        - a. Output of IBM 704
        - b. Output of IBM 7094.
    4. Working deck of ratios, percentages and averages for variables 1 to 63. Based on 9 decks with 7 variables in each. Contain percentiles and map codes. (Format of Deck C (16) in flow chart.)

- B. Indexes:
    1. Percentiles used in establishing socio-economic and family status indexes listed according to Health Area.
    2. Percentiles used in establishing socio-economic and family status indexes listed according to the sum of the percentiles in the socio-economic index.

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*See pages 7, 11, 12, 13 for description of Area Profiles.

Appendix 3

3. Percentiles used in establishing socio-economic and family status indexes listed according to twice the sum of the percentiles in the family status index.

C. Total population:
1. Listing of population weight* for each Health Area in sort by Health Area code.
2. 1960 population of each Health Area divided by 1,000 and listed in sort according to the population weight.*
3. 1960 population of each Health Area listed and totaled on the basis of the first two digits (1,000's omitted).
4. 1960 population of each borough obtained by totaling population of component Health Areas.
5. 1960 population by type of area code with totals for each type of area.
6. 1960 population listed for each Health Area in sort by borough and type of area with totals for population and card count according to borough and type of area.
7. 1960 population listed for each Health Area in sort by type of area and borough with totals for population weight and card count according to type of area and card count.

D. Miscellaneous listings:
1. Listing of map codes in order by Health Area codes. (Format of Deck D (24).)
2. Listing of ethnicity code according to type of area. (Ethnicity code in cols. 76-77 of cards in Deck C, format (12).)
3. Borough totals for selected variables related to Teacher Education.
4. List of header cards for area profiles in order by Health Area (provides data on Health Area designations, Health Area codes, population and type of each Health Area, as well as population of each type of area).
5. Listing of cards set up to provide computer with data to produce area profiles for Health Areas in sort by Health Area code. (Format of Deck E (37).) Header card listed above six data cards.

IV. Arrays (rank listings) have been produced for the 63 variables Each array is in sort by the ratio or average. For each of the 338 Health Areas in each array a percentile rank is printed. To locate a particular area in the array, it is necessary to know the value of the particular area in relation to the particular variable.

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*See pages 7, 11, 12, 13 for description of Area Profiles.

Appendix 4

TABLE FOR CONVERTING HEALTH AREA DESIGNATIONS PRINTED ON INDEX MAP TO THREE DIGIT HEALTH AREA CODES*

Note: Column on left presents Health Area designations while column on right presents three digit Health Ares codes*

BRONX BOROUGH

1.00	001
2.00	002
3.10	003
3.20	004
4.10	005
4.20	006
5.10	007
5.20	008
6.10	009
6.20	010
7.10	011
7.20	012
8.10	013
8.20	014
9.00	015
10.00	016
11.00	017
12.10	018
12.20	019
13.10	020
13.20	021
14.10	022
14.20	023
15.10	024
15.20	025
16.00	026
17.00	027
18.00	028
19.00	029
20.00	030
21.10	031
21.20	032
22.10	033
22.20	034
23.10	035
23.20	036
24.00	037
25.00	038
26.00	039
27.00	040
28.00	041
29.00	042
30.10	043
30.20	044
30.30	045
31.00	046
32.10	047
32.20	048
33.10	049
33.20	050
34.00	051
35.00	052
36.00	053
37.00	054
38.00	055
39.00	056
40.00	057
41.00	058
42.00	059
43.00	060
44.00	061
45.00	062
47.00	063

BROOKLYN BOROUGH

1.00	064
2.00	065
3.00	066
4.00	067
5.00	068
6.00	069
7.00	070
8.00	071
9.00	072
10.00	073
11.00	074
12.00	075
13.00	076
14.00	077
15.00	078
17.00	079
18.00	080
19.00	081
20.00	082
21.00	083
22.00	084
23.00	085
24.00	086
25.00	087
26.00	088
27.10	089
27.20	090
28.00	091
29.00	092
30.00	093
31.00	094
32.00	095
33.00	096
34.00	097
35.00	098
36.00	099
37.00	100
38.00	101
39.00	102
40.00	103
41.00	104
42.00	105
43.00	106
44.00	107
45.00	108
46.00	109
47.00	110
48.00	111
49.00	112
50.10	113
50.20	114
52.00	115
53.10	116
53.20	117
54.00	118
55.10	119
55.20	120
56.00	121
57.00	122
58.10	123
58.20	124
59.00	125
60.00	126
61.00	127
62.00	128
63.00	129
64.10	130
64.20	131
65.00	132
66.00	133
67.00	134
68.00	135
69.00	136
70.00	137
71.10	138
71.20	139
72.10	140
72.20	141
73.10	142
73.20	143
74.10	144
74.20	145
75.10	146
75.20	147
76.00	148
77.00	149
78.10	150
78.20	151
79.10	152
79.20	153
80.10	154
80.20	155
81.10	156
81.20	157
82.00	158
83.00	159
84.00	160
85.10	161
85.21	162
85.22	163
86.10	164
86.20	165
87.10	166
[illegible]7.21	167
87.22	168
88.10	169
88.21	170
88.22	171
89.00	172
90.10	173
90.20	174
91.10	175
91.20	176

MANHATTAN BOROUGH

1.10	177
1.20	178
2.10	179
2.21	180
2.22	181
3.00	182
4.00	183
5.00	184
6.10	185
6.20	186
7.10	187
7.20	188
8.00	189
9.00	190
10.00	191
11.00	192
12.00	193
13.00	194
14.00	195
15.00	196
16.00	197
17.00	198
18.00	199
19.00	200
20.00	201
21.00	202
23.10	203
23.20	204
24.00	205
25.00	206
26.00	207
28.10	208
28.20	209
31.10	210
31.20	211
32.10	212
32.20	213
33.00	214
34.00	215
35.00	216
36.00	217
37.00	218
38.00	219
39.00	220
40.00	221
41.00	222
42.00	223
43.00	224
44.00	225
45.00	226
46.00	227
47.00	228
48.00	229
49.00	230
50.00	231
52.00	232
53.00	233
55.00	234
56.00	235
57.00	236
58.00	237
59.00	238
60.00	239
61.00	240
62.00	241
63.00	242
64.00	243
65.00	244
66.00	245
67.00	246
68.00	247
74.00	248
76.00	249
77.00	250
78.00	251
80.00	252
85.10	253
85.20	254

QUEENS BOROUGH

1.10	255
1.20	256
2.10	257
2.21	258
2.22	259
3.00	260
4.00	261
5.10	262
5.20	263
6.10	264
6.20	265
7.10	266
7.20	267
8.00	268
9.10	269
9.20	270
10.11	271
10.12	272
10.21	273
10.22	274
11.00	275
12.00	276
13.10	277
13.20	278
14.10	279
14.20	280
15.00	281
16.00	282
17.00	283
18.10	284
18.21	285
18.22	286
19.10	287
19.20	288
19.30	289
19.40	290
20.11	291
20.12	292
20.21	293
20.22	294
21.10	295
21.21	296
21.22	297
21.30	298
21.40	299
21.50	300
21.60	301
21.70	302
22.00	303
23.00	304
24.00	305
25.00	306
26.00	307
27.10	308
27.20	309
28.10	310
28.20	311
29.10	312
29.20	313
30.00	314
31.00	315
32.10	316
32.20	317
33.00	318
34.00	319
35.10	320
35.20	321
35.31	322
35.32	323
36.11	324
36.12	325
36.20	326
37.00	327
38.00	328

RICHMOND BOROUGH

1.00	329
2.00	330
3.00	331
4.00	332
5.00	333
6.00	334
7.00	335
8.00	336
9.10	337
9.20	338

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*Three digit codes appear on lower right hand corner of Health Area profiles while Health Area designations as shown on index map appear on top line of each Health Area profile.

Appendix 5

Per Cent of Population Nonwhite or Puerto Rican in Ethnic Areas: 1960, 1965, 1966

Health Area		Per Cent Nonwhite			Per Cent Puerto Rican			Estimated % Increase from 1960 to 1966	
Designations	Codes	1960 *	1965 #	1966 ##	1960 *	1965 #	1966 ##	Nonwhite	Puerto Rican
BRONX									
6.1	9	11.6	24.4	28.6				17	
6.2	10	27.8	36.6	40.5				13	
7.1	11	31.8	30.0	16.0					
7.2	12	13.1	11.1	13.0					
8.2	14	4.8	7.0	7.9					
10	16	4.1	17.4	18.7	4.3	10.5	7.8	15	
11	17	1.1	4.8	9.8				9	
15.1	24	2.9	5.2	8.2				5	
15.2	25	1.9	4.8	10.4	1.4	5.6	12.1	8	11
17	27	7.7	15.6	18.1	7.4	14.9	13.7	10	7
18	28	9.3	27.3	37.5	40.2	39.2	30.6	28	
19	29	9.0	20.6	19.6	9.0	26.5	19.7	11	11
20	30	7.5	21.9	21.6	9.3	26.0	14.1	14	5
21.1	31	4.3	19.2	14.4	9.9	33.1	15.9	10	6
21.2	32	16.8	30.2	35.7	36.8	41.7	34.1	19	
22.1	33	4.5	13.6	19.4				15	
22.2	34	1.7	7.1	14.1	1.1	6.0	6.1	12	5
23.1	35	3.7	8.2	10.5	1.3	4.7	6.4	7	5
24	37	22.4	30.2	34.5	52.0	57.7	44.2	12	
25	38	12.7	26.0	24.0	7.0	17.1	12.0	11	5
26	39	66.2	62.0	64.3	21.5	19.2	21.6		
27	40	48.9	53.2	59.9	31.0	33.5	27.0	11	
28	41	45.7	46.2	55.2	37.4	39.2	33.1	10	
29	42	14.0	26.3	28.5	45.8	47.5	40.7	14	
30.1	43	15.8	19.3	21.4	13.9	20.9	23.8	6	10
30.2	44	9.8	15.1	13.2	9.3	16.6	16.9		8
30.3	45	20.0	25.7	24.2	13.5	18.9	28.2		15
31	46				2.7	4.1	11.5		9
32.2	48	8.8	**	9.9	3.8	**	7.6		
33.1	49	5.6	15.5	27.7	2.6	10.4	15.6	22	13
33.2	50	5.8	14.0	16.7	2.5	6.3	6.9	11	
34	51	30.9	**	39.9	23.6	**	24.1	9	
35	52	84.0	**	74.8	12.3	**	18.7		6
36	53	19.6	**	22.7	61.1	**	56.4		
37	54	26.1	**	36.6	52.7	**	46.8	10	
38	55	24.8	27.7	24.5	16.4	23.5	21.5		5
39	56	16.7	27.8	26.4	17.3	30.3	25.2	10	8
40	57	26.2	30.0	30.7	48.4	52.4	47.1		
41	58	11.7	22.7	21.2	47.6	45.2	44.8	9	
42	59	13.0	22.6	25.1	58.0	57.4	52.5	12	
43	60	13.0	32.0	32.7	24.7	33.1	30.6	20	6
44	61	9.0	21.0	18.4	37.8	51.3	37.2	9	
45	62	13.2	19.1	23.7	40.8	51.7	40.2	10	
47	63	12.3	43.0	20.4	43.5	10.8	45.3	8	
BROOKLYN									
1	64				3.7	7.6	5.7		
4	67				17.1	22.3	26.5		9
5	68	5.2	11.7	7.5	24.1	29.2	23.3		
6	69				37.2	50.9	43.3		6
7	70				7.6	16.7	12.9		5
8	71	7.6	10.7	6.1	21.9	33.8	30.1		8
9	72	14.2	17.3	14.2	17.8	26.7	28.5		11
10	73	45.4	56.3	59.3	20.6	20.8	15.9	14	
11	74	46.1	50.9	49.7	15.6	16.5	20.5		5
12	75	23.7	38.0	42.2	15.6	13.7	9.3	19	
13	76	83.4	79.4	80.7					
14	77	36.2	41.2	37.2	18.3	24.8	24.9		6
15	78	20.5	24.0	17.1	43.6	51.0	49.5		6
17	79	20.9	29.2	21.5	46.4	49.5	49.8		
18	80	50.8	55.9	54.8	31.1	32.6	28.3		
19	81	44.4	49.2	46.7	35.3	37.5	36.0		
20	82	93.4	93.2	93.3					
21	83	89.0	88.8	91.0					
22	84				8.1	12.2	17.0		9
24	86	22.7	29.1	29.6	34.9	34.6	30.5	7	
25	87				8.7	**	16.9		8
26	88	22.9	37.9	29.8	25.9	21.9	24.5	7	
27.1	89	44.3	55.0	47.1	8.0	11.6	7.6		
27.2	90	6.7	19.1	22.3				16	

*1960 Census data.

**Data not available.

# Estimated for 1965 by Department of City Planning.

## Estimated for 1966 by Division of Teacher Education on basis of resident live birth data for 1960 and 1966.

Appendix 5

Per Cent of Population Nonwhite or Puerto Rican in Ethnic Areas: 1960, 1965, 1966

Health Area		Per Cent Nonwhite			Per Cent Puerto Rican			Estimated % Increase from 1960 to 1966	
Designations	Codes	1960 *	1965 #	1966 ##	1960 *	1965 #	1966 ##	Nonwhite	Puerto Rican
BROOKLYN	(contd)								
28	91	93.6	89.8	93.4					
29	92	54.1	64.9	63.5				9	
30	93	92.5	91.0	92.1					
31	94	66.5	80.3	75.4	6.4	8.3	5.9	9	
32	95	4.9	13.3	10.0	6.8	19.1	19.8	5	13
34	97	9.9	26.6	22.0	4.7	22.8	22.3	12	18
35	98	21.0	43.7	33.8	3.6	9.8	8.0	13	
36	99	80.9	87.6	85.4					
37	100	22.9	47.2	60.0	10.3	13.8	13.5	37	
38	101	2.5	8.5	7.4	2.7	5.9	5.7	5	
40	103				19.6	**	19.5		
41	104	22.4	27.2	27.3	17.2	21.3	21.3	5	
42	105	6.2	12.6	11.1	11.1	20.1	17.4	5	6
43	106				9.5	**	14.0		
44	107				11.4	**	19.7		8
45	108	9.2	13.5	17.8				9	
47	110				2.6	**	8.5		6
48	111	7.9	19.5	27.2				19	
49	112	42.5	43.9	55.6				13	
50.1	113	18.6	27.5	30.6	0.8	6.3	5.0	12	
50.2	114	25.4	**	44.0	15.2	**	8.4	19	
52	115	69.5	**	80.5	12.7	**	5.4	11	
53.2	117	3.2	5.7	8.0				5	
54	118	9.9	14.5	24.4				14	
55.1	119	1.5	3.1	12.6				11	
56	121	12.3	42.4	32.5	23.3	24.4	13.9	20	
57	122	34.5	45.9	37.5	34.0	36.9	37.8		
58.1	123	0.5	6.2	19.0				18	
58.2	124	3.9	45.1	21.3	3.4	15.5	5.2	17	
59	125	53.3	60.7	60.7	22.9	22.8	18.2	7	
60	126	26.1	51.0	54.1	36.2	31.2	18.5	28	
61	127	11.3	**	20.9	9.9	**	15.3	10	5
62	128	11.1	21.2	29.2	6.6	20.7	15.4	18	9
63	129	2.7	**	13.0	7.7	**	11.1	10	
64.1	130	12.0	16.2	17.1	5.4	10.1	11.4	5	6
64.2	131	6.9	24.7	24.4	1.4	7.8	8.1	17	7
65	132				16.4	**	28.5		12
66	133				6.2	**	15.3		9
69	136				1.7	4.4	8.8		7
75.2	147	8.5	9.0	9.2					
77	149				2.3	5.1	6.3		
90.1	173	6.2	13.4	11.3	3.1	5.8	6.5	5	
90.2	174				8.9	5.1	5.1		
MANHATTAN									
1.2	178	6.8	**	20.6	2.9	**	11.1	14	8
2.1	179	3.2	4.1	5.1	6.9	8.9	8.1		
2.21	180				2.6	5.4	8.7		6
4	183	7.4	**	8.1	17.0	**	18.3		
5	184	35.4	**	35.0	10.3	**	8.7		
6.1	185	52.2	**	57.1	10.6	**	5.9	5	
6.2	186	70.2	**	72.1					
7.1	187	98.9	**	99.0					
7.2	188	97.2	**	96.9					
8	189	98.7	98.4	97.9					
9	190	19.3	23.5	26.0	33.2	29.2	24.8	7	
10	191	99.2	98.7	98.0					
11	192	64.6	60.0	65.4	23.4	23.6	16.5		
12	193	96.5	95.6	96.7					
13	194	99.2	98.8	99.0					
14	195	42.6	29.1	47.7	19.8	8.7	14.3	5	
15	196	98.5	96.9	99.1					
16	197	76.1	78.5	79.7	15.8	12.7	12.4		
17	198	24.6	26.1	27.9	37.9	46.2	39.6		
18	199	12.9	**	11.4					
19	200	95.7	95.6	95.3					
20	201	53.6	54.2	56.7	37.7	37.1	33.8		
21	202	11.0	13.5	12.0	38.1	43.1	40.5		
23.1	203	11.3	**	9.9	9.6	**	7.3		
23.2	204	19.8	**	22.6	36.6	**	27.7		
24	205	87.1	86.8	82.6	10.6	10.7	15.3		5

*1960 Census data.

**Data not available.

Estimated for 1965 by Department of City Planning.

Estimated for 1966 by Division of Teacher Education on basis of resident live birth data for 1960 and 1966.

Appendix 5

Per Cent of Population Nonwhite or Puerto Rican in Ethnic Areas: 1960, 1965, 1966

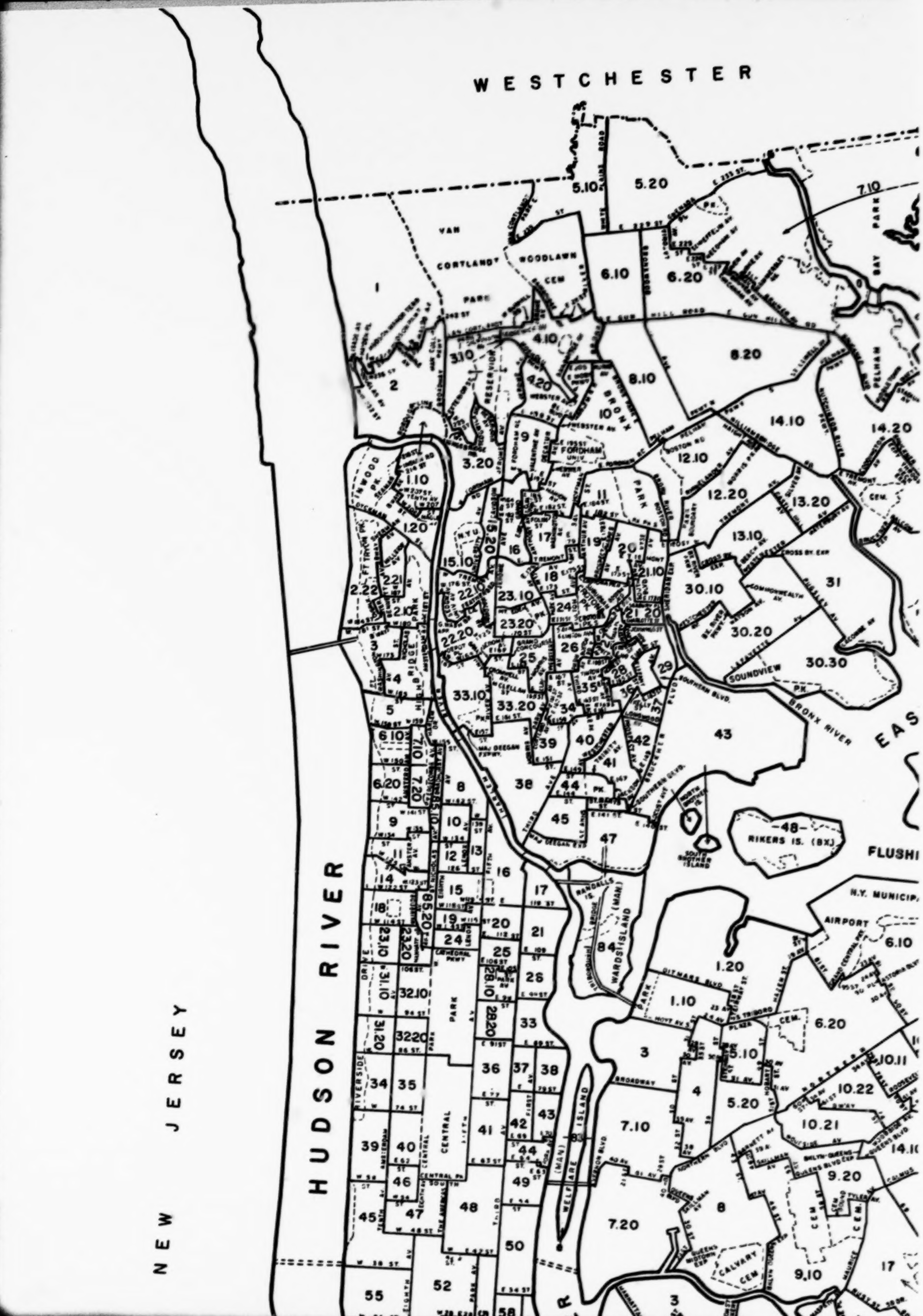
Health Area		Per Cent Nonwhite			Per Cent Puerto Rican			Estimated % Increase from 1960 to 1966	
Designations	Codes	1960 *	1965 #	1966 ##	1960 *	1965 #	1966 ##	Nonwhite	Puerto Rican
MANHATTAN (contd)									
25	206	11.5	17.9	21.0	70.1	64.9	60.5	9	
26	207	25.5	28.0	35.4	48.1	46.6	40.8	10	
28.1	208	24.9	25.6	19.0	51.9	50.0	40.9		
28.2	209	3.3	4.1	8.8	9.0	9.8	17.0	5	8
31.1	210	15.3	13.2	14.9					
31.2	211	5.9	**	7.7					
32.1	212	21.2	23.9	21.7	32.9	24.9	22.9		
32.2	213	10.0	**	12.8	24.7	**	9.9		
33	214	5.9	6.4	7.1	11.5	15.6	15.4		
34	215	7.0	7.0	7.2					
35	216	12.4	12.0	13.4					
39	220	17.2	**	16.7					
40	221	5.5	**	5.7					
45	226				11.6	17.3	15.5		
46	227				9.4	**	11.0		
47	228	6.0	**	5.0	9.2	**	7.0		
52	232	4.9	**	6.7	13.2	**	7.3		
55	234	8.0	**	5.7	21.2	**	17.0		
56	235	3.2	**	6.2	23.2	**	16.1		
58	237	2.8	**	6.4	18.7	**	7.8		
59	238	4.0	**	6.9					
62	241	5.3	7.4	6.5	22.8	18.8	19.4		
63	242	13.7	17.0	18.5	34.8	41.6	35.6	5	
65	244	7.7	10.9	11.2	20.9	22.0	19.0		
66	245	6.4	9.4	9.7	19.4	18.8	16.0		
67	246	5.6	7.8	6.5	31.5	37.8	32.7		
68	247	8.6	11.1	9.0					
74	248	22.6	20.9	23.0	25.0	23.1	25.5		
76	249	15.6	15.3	14.4	29.8	33.9	12.4		
77	250	51.1	72.7	54.5					
78	251	19.9	20.5	26.8	24.3	22.0	24.1	7	
80	252	14.0	13.9	15.0	30.8	28.1	25.1		
85.1	253	99.1	99.6	100.0					
85.2	254	98.1	98.3	97.8					
QUEENS									
3	260	7.4	8.6	7.6					
5.2	263	6.9	7.9	6.4					
6.1	264	51.9	62.3	60.6				9	
7.1	266	6.6	**	7.1	1.1	8.6	5.5		
7.2	267	30.1	**	13.8	12.9	**	13.2		
11	275	35.9	33.2	27.7					
12	276	7.0	7.1	7.1					
15	281				2.8	3.4	6.2		
20.22	294	12.0	15.5	17.8					
28.2	311	0.7	2.6	5.6				5	
29.2	313	0.5	4.3	6.5				6	
32.2	317	28.2	38.1	40.8				13	
33	318	63.6	69.6	73.9				10	
34	319	84.4	84.1	84.8					
35.1	320	76.2	83.6	85.5				9	
35.2	321	32.1	77.8	65.1				33	
35.31	322	0.7	5.1	11.4				11	
35.32	323	65.8	66.0	63.1					
36.12	325	20.0	35.0	34.4				14	
36.2	326	1.3	3.1	5.1					
37	327	17.7	8.2	10.4	3.6	3.8	5.6		
38	328	7.4	13.4	13.9				6	
RICHMOND									
1	329	10.6	15.0	16.7				6	
2	330	5.2	9.4	6.3					
3	331	9.5	14.5	14.2				5	
4	332	8.2	12.6	11.7					
5	333	3.6	11.4	13.1				9	

*1960 Census data.

**Data not available.

Estimated for 1965 by Department of City Planning.

Estimated for 1966 by Division of Teacher Education on basis of resident live birth data for 1960 and 1966.


WESTCHESTER
NEW JERSEY
HUDSON RIVER
VAN CORTLANDT PARK
WOODLAWN CEM
RESERVOIR
BRONX PARK
FORDHAM UNIV
N.Y.U.
INWOOD PK.
SOUNDVIEW PK
BRONX RIVER
EAS
RIKERS IS. (BX)
FLUSHI
N.Y. MUNICIPA AIRPORT
RANDALLS IS.
WARDS ISLAND (MAN)
WELFARE ISLAND (MAN)
SOUTH BROTHER ISLAND
NORTH BROTHER IS.
CENTRAL PARK
CALVARY CEM
BAY
PELHAM
CEM.
DITMARS BLVD
BROADWAY
NORTHERN BLVD
RIVERSIDE DRIVE
AMSTERDAM
CENTRAL PARK WEST
PARK AV
FIRST AV
THIRD AV
FIFTH AV
CATHEDRAL PKWY
MAJ DEEGAN EXPWY
SOUTHERN BLVD
GRAND CONCOURSE
TREMONT
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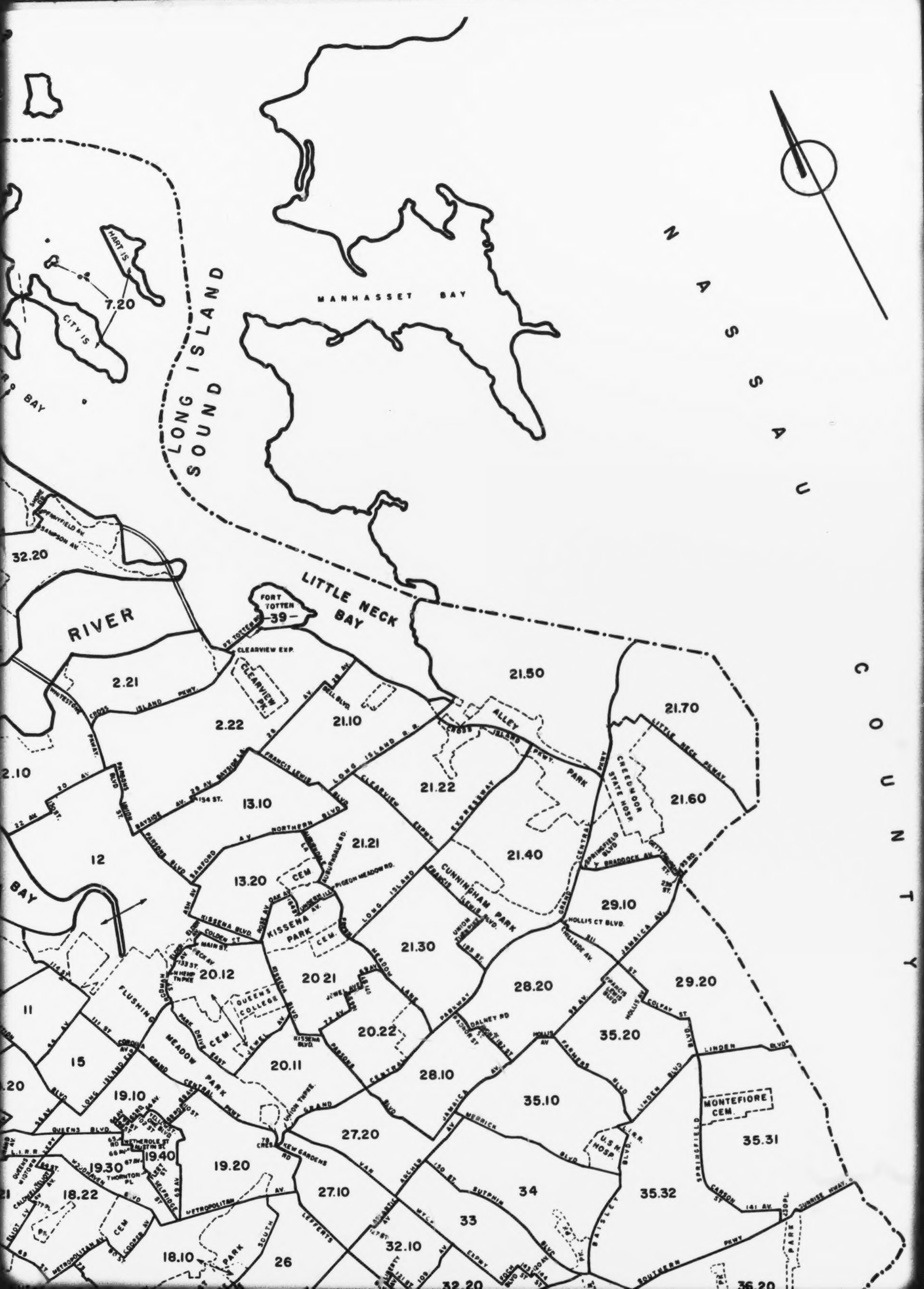
HART IS
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MANHASSET BAY
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LITTLE NECK BAY
FORT TOTTEN
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RIVER
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CLEARVIEW PK.
CLEARVIEW EXP.
CROSS ISLAND PKWY.
WHITESTONE PKWY.
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ALLEY PARK
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LONG ISLAND R.R.
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CUNNINGHAM PARK
UNION TPKE.
GRAND CENTRAL PKWY
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HOLLIS CT BLVD.
HILLSIDE AV.
JAMAICA AV.
BRADDOCK AV.
SPRINGFIELD BLVD
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FLUSHING MEADOW PARK
QUEENS COLLEGE
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FARMERS BLVD.
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KEW GARDENS RD
VAN WYCK
JAMAICA AV.
MERRICK BLVD
U.S.N. HOSP.
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SUTPHIN BLVD
ARCHER AV.
QUEENS BLVD.
METROPOLITAN AV.
LEFFERTS
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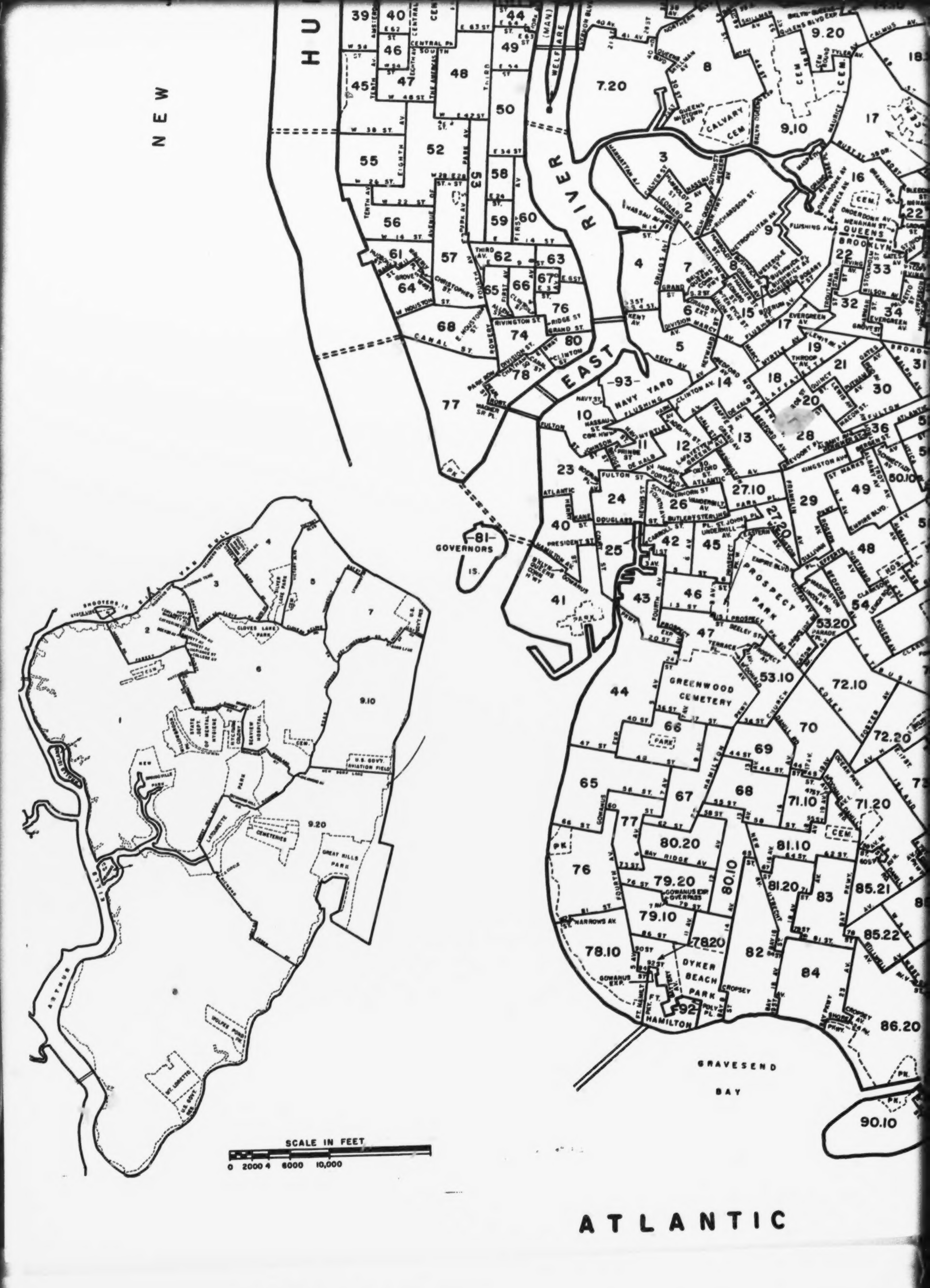
NEW
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RIVER
WELFARE
(MAN)
CALVARY CEM
QUEENS
BROOKLYN
NAVY YARD
-93-
-81-
GOVERNORS
IS.
GREENWOOD CEMETERY
PROSPECT PARK
DYKER BEACH PARK
FT. HAMILTON
GRAVESEND BAY
CLOVES LAKE PARK
BEAVIEW HOSPITAL
CEMETERIES
GREAT KILLS PARK
U.S. GOVT. AVIATION FIELD
SHOOTERS IS.
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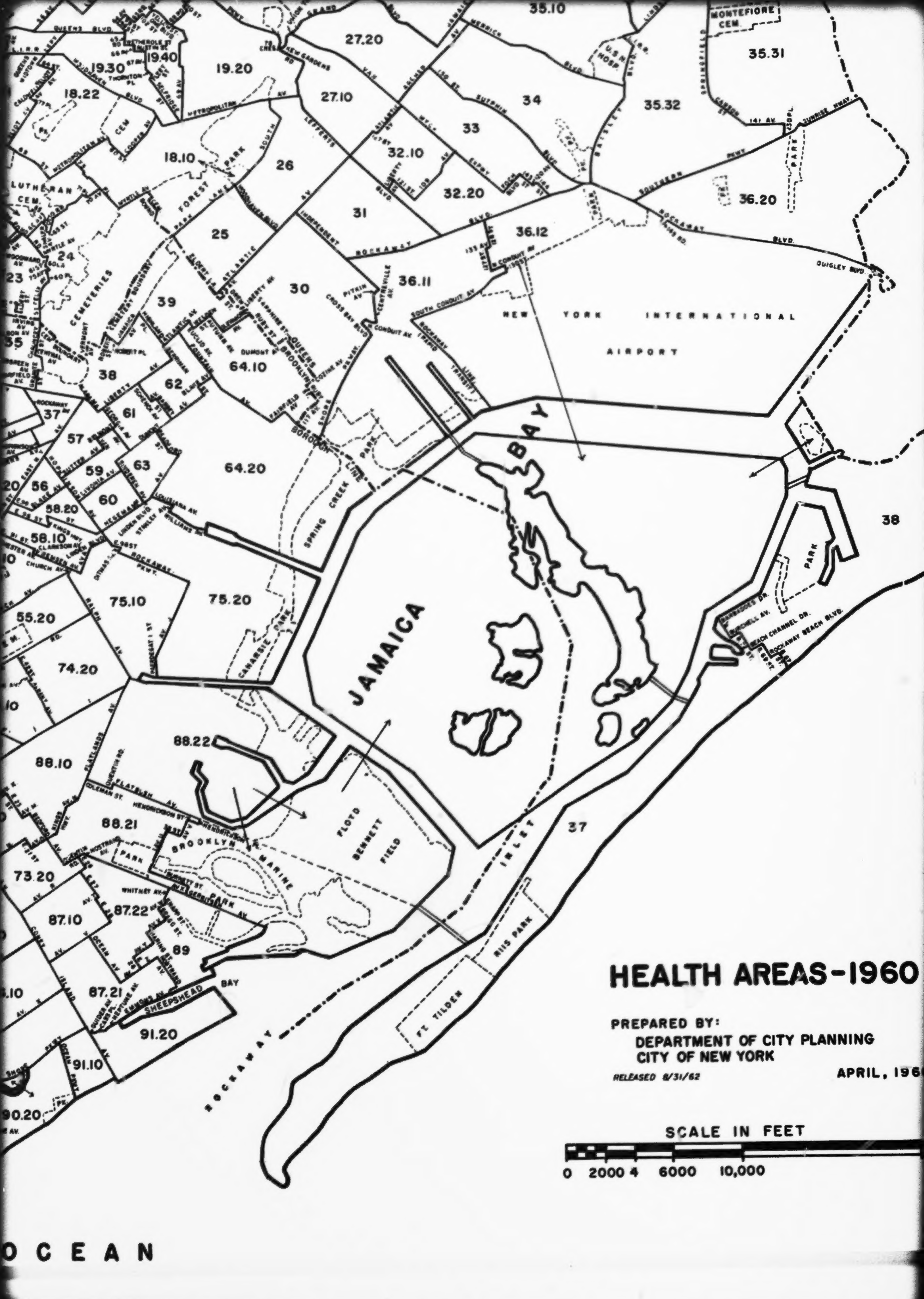
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MONTEFIORE CEM.
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FOREST PARK
LUTHERAN CEM.
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NEW YORK INTERNATIONAL AIRPORT
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SPRING CREEK PARK
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PARK
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JAMAICA
CANARSIE PARK
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FLOYD BENNETT FIELD
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BROOKLYN MARINE PARK
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INLET
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RIIS PARK
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SHEEPSHEAD BAY
FT. TILDEN
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ROCKAWAY
90.20
OCEAN

HEALTH AREAS-1960

PREPARED BY:
DEPARTMENT OF CITY PLANNING
CITY OF NEW YORK

RELEASED 8/31/62

APRIL, 196

SCALE IN FEET

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